Table of Contents

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QUALITY PROFILE OF THE FOOD STAMP PROGRAM'S IQCS DATABASE

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Table of Contents

Table of Contents

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Table of Contents

CONTENTS

Table of Contents

CONTENTS *(continued)* **Page**

CONTENTS *(continued)* **Page**

Table of Contents

Table of Contents

TABLES

Table (*continued*)

EXECUTIVE SUMMARY

This report provides a quality profile of data from the Food Stamp Program's (FSP) Integrated Quality Control System (IQCS), the principal source of information on the characteristics of food stamp participants. The data are used by the U.S. Department of Agriculture's Food and Consumer Service (FCS) and others to describe the characteristics of the food stamp population and to estimate the effect on the FSP of reforms to the program's eligibility and benefit rules. In this quality profile, we bring together all available information about the sources of error that affect the IQCS data and investigate, empirically, how error in the IQCS data may make the characteristics of food stamp participants appear different from what are reported in other key databases that are also used for FSP research--most significantly, the Survey of Income and Program Participation (SIPP).

This quality profile addresses the following research questions:

- To what extent do the IQCS data have internal inconsistencies? What are the causes of these inconsistencies and to what extent do these inconsistencies affect the quality of the IQCS data for FSP research? Finally, how should these inconsistencies be reconciled in the IQCS editing process?
- To what extent does sampling error affect the quality of the IQCS data?
- To what extent do various types of nonsampling error affect the quality of the IQCS data?
- Are the IQCS asset data reliable?
- To what extent do the characteristics of FSP participants as reported in sample survey data differ from the characteristics of FSP participants as reported in IQCS data? What do these differences suggest about the quality of the IQCS data?
- What are the implications of IQCS data error for the calibrating of FCS's MATH® CPS microsimulation model?

The FSP's Integrated Quality Control System (IQCS)

The IQCS data are generated from monthly quality control (QC) reviews of FSP cases that are conducted by state FSP agencies. The primary objective of the QC review is to assess the accuracy of eligibility determinations and benefit calculations. That is, it is designed to measure (1) if units are eligible for participation and receiving the correct coupon allotment, or (2) if unit participation is correctly denied or terminated. QC reviews are essentially audits that provide a basis for a system of financial penalties and incentives whose purpose is to hold states accountable for FSP certification accuracy.

The quality control system is based on a large national sample of participating units and a somewhat smaller sample of denials and terminations.[1] The national sample of participating units is stratified by month and by the 50 states, the District of Columbia, Guam, and the Virgin Islands. Annual state samples range from a minimum of 300 to 2,400 reviews depending on the size of the monthly participating caseload. Several states have integrated Food Stamp, Aid to Families with Dependent Children (AFDC), and Medicaid QC sample selection and review processes.

State QC reviewers collect financial and demographic data from the sampled unit's case file, visit the unit and re-interview the participants, and determine whether the unit received the correct FSP coupon allotment. The state reviewer then enters in a data coding form all the *original caseworker's* data on the FSP household's income and characteristics along with the state reviewer's own findings as to whether the case had a payment error. The data from the coding form is then keyed into a computer that is linked to FCS's national computer center where the data are transmitted for inclusion in the IQCS database. Next, FCS regional offices conduct a federal re-review of a subsample of the original state sample. Federal re-review data, which contain the federal reviewers error findings, are also transmitted to the national computer center where they are included in the IQCS database and used in conjunction with the state review data to calculate the official payment error rate for each state. Lastly, states are sanctioned, rewarded, or neither on the basis of their official payment error rates.

Data and Methodology

We address the research questions of this quality profile by pulling together knowledge about the IQCS data quality that has been acquired separately and reported in numerous documents over a period of years. We also address the research questions of this quality profile through analyses of the IQCS database, whose assessment is the principal objective of this report, and through analyses of the QC database and the quality profile database. Each of these databases are introduced below.

The IQCS database is developed from monthly quality control (QC) reviews of FSP cases that are conducted by state FSP agencies. Although calculating state payment error rates is the primary objective of the QC system and its resulting IQCS data, a secondary and important use of the IQCS data is as a source of detailed demographic and financial information for a large sample of active food stamp units in a given fiscal year. The IQCS data are the source for an annual report on the characteristics of FSP households. They also provide the database for one of FCS's microsimulation models that estimates the impact on current FSP participants of proposed reforms to the FSP and various welfare programs that affect the FSP.

It is important to keep in mind the following point about the IQCS data: except for a small number of fields relating to error findings and the value of the food stamp benefit in the sample month, the fields in the IQCS database are usually drawn from the *caseworker's findings*, as recorded by the state QC reviewer on the integrated review schedule. That the IQCS data contain the caseworker's findings rather than those

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[1]Throughout this report, we will use the terms "FSP unit" and "FSP household." The term "FSP unit" refers to persons in a household who together are certified for and receive food stamps. In contrast, the term "FSP household" refers to all persons who reside together in a household that contains at least one person receiving food stamps. Accordingly, an FSP household may contain non-FSP persons.

of the state reviewer suggests that the data already contain errors because we know that a certain percentage of cases contain payment errors.

In addition to the IQCS database, we also use the QC database and the quality profile database to address the research questions of this quality profile. The QC database is simply the IQCS data after being modified slightly and edited for consistency. The quality profile database was created specifically for this report and contains data abstracted from a sample of 574 administrative case files containing the detailed findings of the state and federal QC reviews.

Data Consistency

An important measure of the quality of a database--and one that requires no external validation--is internal consistency. There are multiple ways to obtain measures of unit size, income, and benefits using IQCS data. Although the IQCS data contain a reported value for each of these measures, these measures can also be constructed from other items in the IQCS data. For example, gross income is not only reported directly in the IQCS data, but it can be constructed by summing the income reported for each person in the FSP unit. In the 1993 IQCS data, reported and constructed gross income differed by more than $5 in 17 percent of the sample households. For FSP benefits, net income, and the earned income deduction, the reported and constructed amounts differed by more than $5 in 10 percent, 16 percent, and 2 percent of the sample units, respectively. Altogether 35 percent of the sample units had inconsistent reported and constructed values for at least one of these four items.

An initial hypothesis of this study is that many inconsistencies exist in the IQCS data because most of the IQCS data contain the original caseworker's findings, errors and all, rather than the corrected state or federal QC reviewers' findings.[2] This hypothesis suggests that inconsistencies should be more prevalent in cases state and federal QC reviewers determined to have payment errors. Oddly, though, inconsistencies are only somewhat more prevalent among cases with reported payment errors than among cases without payment errors: 38 percent versus 34 percent. Clearly, then, cases with payment errors cannot account for more than a small fraction of the measured inconsistencies in the IQCS data.

To determine the extent to which caseworker errors contribute to inconsistencies in the IQCS data, we abstracted data from the administrative case files containing the detailed findings of the state and federal QC reviews for a probability sample of cases in the 1993 IQCS data. We then compared the incidence of inconsistencies in the caseworker's data--that is, the data that makes up most of the IQCS data--with that of the federal QC reviewer's data. Contrary to our expectations, the federal data show a much higher rather than lower percentage of cases with an inconsistency for both gross income and the earned income deduction, and a *somewhat* higher percentage of cases with an inconsistency for the FSP benefit.

From examining the abstracted data, the actual case files, and the IQCS data for a number of individual cases, we draw two conclusions as to why the federal reviewer's data would show a higher rate of inconsistencies than the caseworker's data. First, the difficulty of abstracting the federal (and state) reviewers' data from worksheets and computation sheets that are not designed for this purpose led to

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[2]The only fields that are added to the IQCS data by the state and federal QC reviewers pertain to whether the household had a payment error, and the amount of that payment error. All the values for income and household characteristics in the IQCS data are those as determined by the original caseworker.

improperly abstracted data that, in turn, inflated the measured rates of inconsistency. Second, what appear to be inconsistencies in the caseworker's data may not actually be inconsistencies, but rather may be cases with (1) a prorated FSP benefit, (2) a benefit adjustments for reductions or recoupments, (3) countable income from someone not in the FSP unit, or (4) an improperly calculated net income because the IQCS data do not contain dependency or disability indicators for the persons in the FSP unit.

The first explanation for why apparent inconsistencies in the caseworker's data may not actually be inconsistencies is that the household may be receiving a prorated FSP benefit. A prorated monthly benefit is given to households in the month that they first begin to receive food stamps if their start date for receiving food stamps is after the first of the month. In households with a prorated benefit, the benefit actually received will be less than the benefit implied by the unit's reported net monthly income. It appears that between one-quarter of the cases on the IQCS database with inconsistent benefit amounts can be attributed to the receipt of a prorated benefit. We have no explanation as to the cause of inconsistent benefit amounts for the remaining cases where the benefit actually received is greater than the benefit implied by the unit's reported net monthly income.

The second explanation for apparent inconsistencies is that an FSP unit may be subject to a benefit adjustment in the sample month. Benefit adjustments, which can be either a reduction or recoupment of benefits, can occur for a number of reasons, such as an underpayment or overpayment in a previous month. Benefit adjustments, like prorated benefits, are not indicated in the IQCS data and will show a benefit amount that is either greater than or less than the benefit implied by the unit's reported net monthly income.

The third explanation for apparent inconsistencies is that the FSP unit's countable income may include the income of someone not in the FSP unit. Up to one-fifth of the cases with inconsistent gross income amounts and two-fifths of the cases with inconsistent earned income deduction amounts can be explained by the FSP unit's countable income including the income of someone not in the FSP unit. The remaining inconsistencies are unexplained.

Finally, the fourth explanation for apparent inconsistencies is that the net income may be calculated improperly because the deductions to which the unit are entitled may be calculated improperly. The deduction, in turn, may be calculated improperly because the number of dependents or disabled persons in the unit, which affects deduction amounts, is not indicated in the IQCS data.

Our findings with respect to inconsistencies have implications for the editing of the QC database. They suggest that the best editing strategy to make the IQCS data conform as closely as possible to the income amounts actually used to determine benefit amounts is to defer to the reported value of a variable whenever an inconsistency exists between this value and its predecessors or components. For example, when reported gross income and the sum of person-level income amounts disagree, the reported gross income is most likely the correct value. Although this is not the strategy employed by the current editing scheme, changing the current editing scheme may or may not be appropriate. The added benefit of any changes to the current editing scheme should be carefully weighed against the cost and complexity of making the changes.

Sampling Error

The IQCS data are a sample of the entire population of case files, and, therefore, estimates based on these data are subject to sampling error. The design of the IQCS sample, nationally, reflects the multiple

purposes to which the data are applied. State sample sizes vary in proportion to their food stamp caseloads but only between a specified minimum and maximum.

The calculation of standard errors for estimates of the characteristics of the FSP population at the national level requires the application of procedures for complex samples because sampling rates differ by state and because states may stratify their samples differently. Estimates of the standard errors associated with sample estimates of a wide variety of characteristics of food stamp households in the IQCS database are published annually, along with the methodology used to calculate these standard errors.

Nonsampling Error: Sample Selection, Editing, and Weighting

About 5 percent of the food stamp caseload is not eligible for QC review in a given month. An

and the caseworker disagree as to whether there are any countable assets at all. For a comparable fraction of the caseload, they agree that there are assets but differ on the amounts. Thus there is disagreement on the asset holdings of just over one-third of the total caseload. For about one third of these cases the differences are less than $100 while they exceed $500 for a somewhat smaller fraction. When the federal reviewer and the caseworker differ, though, the federal reviewer finds greater assets in only somewhat more than half the cases.

Congruity with Survey Data

We find that errors in the IQCS data do not explain the discrepancies between SIPP estimates of the characteristics of FSP participants and IQCS data estimates. The caseworker and federal reviewer estimates of the proportion of FSP units with various income types is very similar for all items except for earnings, where 21 percent of FSP units have earned income according to federal reviewer data versus 19 percent according to caseworker data. Even so, the differences for earnings in IQCS data do not nearly explain the 15 percentage point discrepancy that was observed in 1983 between the number of FSP units with earned income according to SIPP (34 percent) and the IQCS (19 percent). These findings suggest that the discrepancies that exist between SIPP and IQCS data are in all likelihood due primarily to problems with the SIPP data, such as the underreporting of earned income by respondents.

Implications for Calibrating the MATH® CPS Model

The IQCS data are the data source for the QC Minimodel, which has seen wide application in recent years but has one important drawback for policy analysis: it cannot simulate reforms that would increase FSP participation in any segment of the population. To simulate expansive reforms, FCS employs microsimulation models such as the MATH® CPS and MATH® SIPP that use underlying databases containing both FSP participants and nonparticipants. The impact of expansive reforms is assessed by comparing the simulated FSP caseload after a reform with the "baseline" FSP caseload--that is, the caseload under current FSP rules. The selection of households for the MATH® CPS baseline is calibrated so that the baseline households resemble the food stamp population according to the IQCS data in terms of size and key characteristics.

We evaluated the extent to which error in the IQCS data might affect the MATH® CPS baseline by comparing the caseworker and federal reviewer data in our sample of abstracted cases with respect to some of the variables used in the calibration. In our estimation, none of the differences between the caseworker and federal reviewer data are sufficiently marked to suggest that the MATH® CPS baseline would be substantially different were it to be calibrated to the corrected reviewer data rather than the original caseworker data as it appears in the IQCS data.

Suggestions for Future Research

It is clear that a careful review of a sample of case records was long overdue. We recommend additional review in order to obtain the knowledge needed to improve the editing procedures even further. Such review should follow a different strategy, however. We recommend that a sample of inconsistent cases be reviewed with the goal of determining precisely why each case is inconsistent and documenting

the elements of each such finding in sufficient detail that the implications for a prospective editing algorithm at any point in the future can be ascertained.

Table of Contents

I. INTRODUCTION

This report provides a quality profile of the Food Stamp Program's (FSP) Integrated Quality Control System (IQCS) database. The IQCS data are the principal source of information on the characteristics of food stamp participants. The data are used by the U.S. Department of Agriculture's Food and Consumer Service (FCS) and others to describe the characteristics of the food stamp population and to estimate the effect on the FSP of reforms to the program's eligibility and benefit rules. Because the data play an important role in FSP research, it is important that the quality of the data be assessed. In this quality profile, we bring together all available information about the sources of error that affect the IQCS data and investigate, empirically, how error in the IQCS data may make the characteristics of food stamp participants appear different from what are reported in other key databases that are also used for FSP research--most significantly, the Survey of Income and Program Participation (SIPP).

A. PURPOSE OF A QUALITY PROFILE

In two studies completed within the past decade, the National Academy of Sciences recommended the preparation of quality profiles as an aid to understanding the sources of error in data collection systems (National Research Council 1989, 1991). A quality profile, according to the Academy, "identifies measures and procedures for monitoring errors; brings together what is currently known about each source of error and its impact on the estimates; and outlines needed research and experimentation designed to gain better understanding of sources of error and to lead to the development of techniques to reduce their magnitude" (National Research Council 1989). The most recent quality profile that has particular relevance to research on the FSP is the SIPP quality profile (Jabine et al. 1990).

Prospective uses as well as abuses of error profiles are discussed by Bailar (1983), who was involved in the development of the first quality profile prepared by a federal agency (Brooks and Bailar 1978). This earlier study of the Current Population Survey is still regarded as a landmark in the field of quality

assessment (National Research Council 1989). In its review of the National Science Foundation's data system on scientists and engineers, the National Academy of Sciences recommended preparation of a quality profile as a first step in the development of a program for quality control and improvement. More recently, the Academy panel on microsimulation also recommended development of data quality profiles and specifically cited the IQCS because of its role as an input to social welfare policy microsimulation models (National Research Council 1991).

This report differs in one significant way from quality profiles that have been prepared for other databases. While quality profiles typically pull together knowledge about data quality that has been acquired separately and reported in numerous documents over a period of years, most of the empirical research that is presented here was produced specifically for this report. That the research was produced specifically for this report has three implications of note. First, much of the research is new and has yet to be digested by the data producers and users. Second, parts of this document resemble a research report more than a summary or profile of what is known. And third, the breadth of material presented here is fairly limited. With future updates, which we encourage, we would expect that the nature of this quality profile of the IQCS data will change.

B. RESEARCH QUESTIONS

This quality profile addresses the following research questions:

- To what extent do the IQCS data have internal inconsistencies? What are the causes of these inconsistencies and to what extent do these inconsistencies affect the quality of the IQCS data for FSP research? Finally, how should these inconsistencies be reconciled in the IQCS editing process?
- To what extent does sampling error affect the quality of the IQCS data?
- To what extent do various types of nonsampling error affect the quality of the IQCS data?
- Are the IQCS asset data reliable?

- To what extent do the characteristics of FSP participants as reported in sample survey data differ from the characteristics of FSP participants as reported in IQCS data? What do these differences suggest about the quality of the IQCS data?

- What are the implications of IQCS data error for the calibrating of FCS's MATH® CPS microsimulation model?

The findings for these research questions, along with a description of the FSP's quality control system, will improve researchers' understanding of analyses using IQCS data.

C. ORGANIZATION OF THIS REPORT

Understanding the objectives of the system by which the IQCS data are collected--the Food Stamp Program's quality control system--is important to understanding the various types and sources of error in IQCS data. Therefore, the FSP's quality control system is described in detail in Chapter II. An overview of the data and methodology used to answer the research questions posed for this quality profile is presented in Chapter III. Findings with respect to IQCS data quality are assessed in Chapters IV and V: internal consistency is assessed in Chapter IV; and sampling error, various types of nonsampling error, the reporting of asset data, and congruity with survey data is assessed in Chapter V. Our conclusions and suggestions for future research are presented in Chapter VI.

Table of Contents

II. THE FSP'S INTEGRATED QUALITY CONTROL SYSTEM (IQCS)

The IQCS data are generated from monthly quality control (QC) reviews of FSP cases which are conducted by state FSP agencies. The primary purpose of the QC reviews is to assess the accuracy of eligibility determinations and benefit calculations. The reviews are designed to measure (1) if units are eligible for participation and receiving the correct coupon allotment, or (2) if unit participation is correctly denied or terminated. In essence, QC reviews are audits that provide a basis for a system of financial penalties and incentives whose purpose is to hold states accountable for FSP certification accuracy.

In addition to their usage in the calculation of official FSP payment error rates, the IQCS data have a number of secondary uses. The QC branch of FCS produces an annual publication that, in addition to reporting the official state error rates, provides detailed information on the characteristics of units with and without payment errors. The IQCS data are analyzed further for their potential contribution to efforts to understand better the sources of payment errors and reduce their incidence. Uses unrelated to payment error rates exist as well. The IQCS data are edited for consistency and are used to produce the annual report entitled *Characteristics of Food Stamp Households*, issued by the FCS, Office of Analysis and Evaluation. The data are also used for ad hoc analyses and as input to the QC Minimodel--one of FCS's microsimulation models, which is used to estimate the impact on current FSP participants of hypothetical reforms to the FSP. Lastly, the data are used to impute FSP related data on the input database for FCS's MATH® CPS microsimulation model, and the data are used to select the baseline FSP participants for FCS's MATH® CPS and MATH® SIPP microsimulation models.

Understanding the objectives of the persons collecting the IQCS data and the system by which the data are collected is important to understanding the various types and sources of error and inconsistencies in IQCS data. This chapter describes in detail the Food Stamp Program's quality control system and its

resulting IQCS data. We describe how the QC sample is drawn, how each case is reviewed, and how QC reviewers determine whether a case contains an official payment error.[1]

A. OVERVIEW OF THE QUALITY CONTROL SYSTEM

The quality control system is based on a large national sample of participating units [2] and a somewhat smaller sample of denials and terminations. Because this is a quality profile of IQCS data for its use in FSP research, this report focuses on the sample of participating units rather than the sample of denials and terminations.[3] The national sample of participating units is stratified by month and by the 50 states, the District of Columbia, Guam, and the Virgin Islands. Annual state samples range from a minimum of 300 to 2,400 reviews depending on the size of the monthly participating caseload. Several states have integrated Food Stamp, Aid to Families with Dependent Children (AFDC), and Medicaid QC sample selection and review processes (Table II.1).

State QC reviewers collect financial and demographic data from the sampled unit's case file, visit the unit and re-interview the participants, determine whether the unit received the correct FSP coupon allotment, enter all review information on a data coding form, and then key the data into a computer that is linked to FCS's national computer center where the data are transmitted for inclusion in the IQCS database. Next, FCS regional offices conduct a federal re-review of a subsample of the original state sample. Federal re-review data are also transmitted to the national computer center where they are

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[1]Error here refers only to whether units received the correct coupon allotment as determined by a QC reviewer during the actual QC review process. It does not refer to the more general concept of error in the IQCS data that is a major topic of this report.

[2]Throughout this report, we will use the terms "FSP unit" and "FSP household." The term "FSP unit" refers to persons in a household who together are certified for and receive food stamps. In contrast, the term "FSP household" refers to all persons who reside together in a household that contains at least one person receiving food stamps. Accordingly, an FSP household may contain non-FSP persons.

[3]In fact, in many states, QC reviews of denials and terminations only occur if the state's payment error rate is low enough to potentially qualify it for enhanced funding.

TABLE II.1

DISTRIBUTION OF CASES WITH INTEGRATED QC REVIEWS BY STATE
(Entries are percentage of cases in each state with each type of review)

	FSP Integrated Reviews			
State	AFDC/ Medicaid	AFDC	Medicaid	FSP Only
Alabama				100.0
Alaska	50.3			49.7
Arizona	39.2			60.8
Arkansas				100.0
California	52.4	2.9		44.7
Colorado	47.4		13.7	38.9
Connecticut	53.9			46.1
Delaware	38.3			61.7
Dist. Col.				100.0
Florida				100.0
Georgia				100.0
Hawaii				100.0
Idaho	21.3			78.7
Illinois	56.7			43.4
Indiana	24.0	0.1	6.4	69.5
Iowa	42.5			57.5
Kansas	38.0		10.8	51.2
Kentucky				100.0
Louisiana				100.0
Maine				100.0
Maryland				100.0
Massachusetts	52.2			47.8
Michigan	52.9			47.1
Minnesota	47.4		27.5	25.0
Mississippi				100.0
Missouri	33.4		17.1	49.5
Montana	37.0			63.0
Nebraska				100.0
Nevada				100.0
New Hampshire	35.0		28.4	36.6
New Jersey				100.0
New Mexico				100.0
New York			0.1	99.9
N. Carolina				100.0
N. Dakota	25.0		35.7	39.3
Ohio	37.3			62.7
Oklahoma				100.0
Oregon	56.2			43.8
Penn.				100.0
Rhode Island	54.5			45.5
S. Carolina				100.0
S. Dakota	18.0			82.0
Tennessee				100.0
Texas				100.0
Utah	40.8		20.2	39.0
Vermont	36.7		18.5	44.8
Virginia				100.0
Washington	46.2			53.9
W. Virginia	56.7			43.3
Wisconsin	66.4		8.8	24.8
Wyoming	47.7			52.4

SOURCE: 1993 IQCS Database

included in the IQCS database and used in conjunction with the state review data to calculate the official payment error rate for each state. Lastly, states are sanctioned, rewarded, or neither on the basis of their official payment error rates.

A more detailed description of the FSP quality control system follows.[4]

B. SELECTION OF HOUSEHOLDS FOR QC REVIEW

Each month, food stamp agencies in all 50 states, the District of Columbia, Guam, and the Virgin Islands draw two samples: (1) a sample of units receiving food stamps in their state (active cases), and (2) a smaller sample of units that either were terminated from the program or that applied for the program but were denied benefits in their state. While almost all participating food stamp units are eligible to be included in the sample of active cases, certain types of units not amenable to QC review are excluded. Specifically, the active cases universe includes all units receiving food stamps during a review period except those in which the participants died or moved outside the state, received benefits by a disaster certification authorized by the Food and Consumer Service (FCS), received benefits under a 60-day continuation of certification, were under investigation for FSP fraud (including those with pending fraud hearings), were appealing a notice of adverse action and the review date falls within the time period covered by continued participation pending hearing, or received restored benefits in accordance with the FCS-approved state manual but were otherwise ineligible. The sampling unit within the active universe is the food stamp unit as defined in an FCS-approved state manual.

State sampling plans must conform to accepted principles of probability sampling. States may use simple random sampling or any of various complex designs that best meet a state's needs. If a state chooses to adopt a sample design other than simple random sampling, the design must be fully described

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[4]The description of the QC system in this chapter is drawn from the following three sources: U.S. Department of Agriculture (1992); U.S. Department of Agriculture (1987); and National Research Council (1987).

and documented, submitted for approval as part of the state plan, conform to probability sampling principles, and provide for estimates of payment error rates with at least the precision that would be obtained by simple random samples of the size that result from the use of FCS formulas for sample size calculation for simple random samples.

Annual state sample sizes range from a minimum of 300 to 2,400 reviews depending primarily on the size of the monthly participating caseload. States must use the following guidelines when determining annual sample sizes:

(1) if a state's average monthly caseload is under 10,000, then the minimum QC sample size is 300 cases per year;

(2) if a state's average monthly caseload is over 60,000, then the standard minimum QC sample is 2,400 cases per year and the optional minimum (defined below) is 1,200 per year; and

(3) if a state's average monthly caseload is between 10,000 and 60,000, the standard and optional minimum samples are derived by the following formulas:

standard minimum = 300 + 0.042 (N - 10,000)
optional minimum = 300 + 0.018 (N - 10,000)

where N is the average monthly caseload

A state may choose the optional minimum sample size if it agrees not to dispute later payment error rate findings and the associated sanctions on the basis of the precision of the estimates.

Federal subsamples are drawn from the set of all state-completed cases for a given fiscal year. The size of the federal subsample varies depending on the state sample size; federal sample sizes typically range from 150 to 400 cases per year.

C. THE QC REVIEW

Recall that the purpose of drawing the above samples is to assess the accuracy of eligibility determination and benefit calculations. Certain demographic and financial data are also collected during the review to allow for various analyses of the sources and types of errors. These same data are also an

excellent source with which to describe the circumstances and characteristics of FSP units and participants, more generally. Almost all of these data, which make up the IQCS database, are collected during the state portion of the QC review.

1. Timing of State Reviews

FCS requires that state QC reviews begin promptly once a particular month's sample is drawn so that the review results for all cases selected can be reported to FCS within 95 days after the end of the sample month. Completing the state QC review process promptly has the following advantages: it makes it easier for QC reviewers to locate the selected units for interviews; it increases the likelihood that reviewed units, when interviewed, will be able to provide accurate information about their circumstances in the sample month; it makes it easier to obtain corroborating information from other agencies or institutions (for example, banks or employers); and finally, it helps ensure that program performance data will be available in a timely manner.

2. Conducting State Reviews

After a particular month's QC sample is drawn, the following 5-step state QC review process begins:

(1) ***Determine the Correct Eligibility, Budgeting, and Reporting Systems.*** The reviewer determines which eligibility, budgeting, and reporting systems should have been used for each unit based on the state agency's selection of regulatory options and individual unit circumstances.

(2) ***Case Record Review.*** The reviewer reviews each unit's original case record to determine what action was taken on the case by the state eligibility worker.

(3) ***Field Review.*** The reviewer interviews the units and obtains verification of case record information from various collateral contacts.

(4) ***Error Determination.*** The reviewer determines whether discrepancies or variances exist between information in the original case record and the results of the case record and field reviews for the same sample month.

(5) ***Reporting the QC Results.*** The reviewer submits the results of the QC review to FCS on standard forms.

Each of the above 5 steps is described in greater detail below.

a. Determine the Correct Eligibility, Budgeting, and Reporting Systems

Food Stamp Program regulations give states a few options (or "systems") with which to determine a unit's FSP eligibility and benefit level. Therefore, to determine whether a unit received the correct coupon allotment in the sample month, the QC reviewer must first determine which systems the state agency originally used to determine eligibility and benefits for the unit. An overview of these systems is presented next.

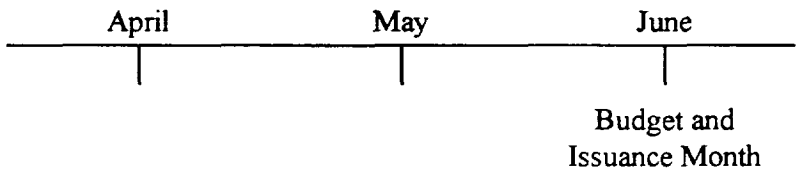
Eligibility Systems. The system that a state uses to determine a unit's eligibility for the FSP is based upon the unit's financial and certain nonfinancial circumstances for each month of participation. A unit's financial circumstances can be considered in one of two ways for FSP eligibility: *prospectively* or *retrospectively*. Prospective eligibility entails determining a unit's eligibility for a specific month (called the "issuance month") on the basis of existing circumstances that are expected to remain the same for the issuance month or on changes in existing circumstances that are reasonably certain to occur for the issuance month. For example, units with fixed incomes only, such as AFDC, can typically have their eligibility determined prospectively because their incomes are usually constant from month to month.

Retrospective eligibility entails using known information from a previous month on which to base eligibility for the issuance month. Retrospective eligibility is typically appropriate for units without fixed incomes. States may use a one- or two-month retrospective system.

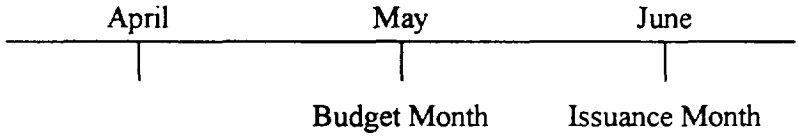
Budgeting Systems. The system that a state uses to calculate a unit's FSP benefit level, which is called the budgeting system, can also consider a unit's financial circumstance prospectively or retrospectively. Like prospective eligibility, prospective budgeting entails determining a unit's coupon allotment for the issuance month on the basis of existing circumstances that are expected to remain the same for the issuance month or on changes in existing circumstances that are reasonably certain to occur for the issuance month. And, like retrospective eligibility, retrospective budgeting entails using known

information from a previous month to determine a coupon allotment for the issuance month. States may use a one- or two-month retrospective system. The diagram below shows examples of the budget and issuance months for a prospective system, and a one- and two-month retrospective system.

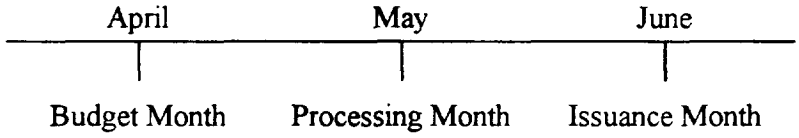
Prospective System



One-Month Retrospective System



Two-Month Retrospective System



States are not required to use the same eligibility and budgeting system for a particular case. When retrospective budgeting is combined with prospective eligibility, though, the QC reviewer must verify the unit's circumstances for *both* the issuance month (for prospective eligibility determination) and the budget month (for retrospective benefit determination).

Reporting Systems. The rules regarding whether and when a unit already certified for FSP benefits must report changes to their household circumstances is know as the reporting system. Household circumstances for which a change must be reported include the following: income level, household

composition, place of residence and shelter expenses, assets, and medical expense for elderly or disabled members. Units subject to prospective budgeting are required to report only changes to their household circumstances, whereas units subject to retrospective budgeting are required to submit reports of their household circumstances each month, regardless of whether these changed from the previous month.

QC Review. The QC reviewer must determine eligibility and benefit amounts and any errors on the basis of the correct eligibility and budgeting system even if an incorrect one was actually used. In determining the correct systems to use, the reviewer considers the food stamp regulations, state options, and individual unit circumstances. For example, if an AFDC unit with earned income should have been subject to retrospective budgeting for food stamp purposes but was erroneously certified prospectively, the QC reviewer must use the retrospective budgeting review procedures.

b. Case Record Review

The QC reviewer begins the formal review of a case by examining the unit's characteristics, financial circumstances, and authorized FSP benefit as documented in the original case record by the eligibility worker who processed the case. On the basis of the original case record, the QC reviewer determines whether the eligibility worker calculated the correct FSP benefit. If during the case review the reviewer can determine and verify that the unit was ineligible, the reviewer can, in most cases, terminate the review at that point. Otherwise, the QC reviewer proceeds to the field review.

During the case record review, the reviewer records the eligibility worker's findings for the various unit characteristics and financial circumstances relevant to eligibility and benefit determination in column 2 of the QC review worksheet, Form FNS-380 (see Appendix B). The reviewer also fills out column 1 of the QC computation sheet (see Appendix C), which shows precisely how eligibility and benefits were calculated by the eligibility worker. The QC reviewer compares each element of the worksheet and computation sheet with what the reviewer observes in the field review, which is explained next. On the basis of this comparison, the QC reviewer determines whether the case has a payment error.

c. Field Review

The purpose of a field review is to obtain all relevant information about the unit's actual circumstances that relate to the unit's eligibility and benefit level for the sample month and to verify and document the information. The field review has two parts: (1) interviewing the unit (at home); and (2) making collateral contacts to verify any information that was obtained in the interview but was not adequately documented

[redacted]

obtained from them are the following: verifying unit composition and rent levels from the unit's landlord,

determines the error status by entering the relevant information from the field review in column 2 of the QC computation sheet, next to the eligibility worker's computations that were entered in column 1 during the case record review. The error determination process has two steps: the eligibility test and the allotment test. Each test is conducted using the eligibility and budgeting systems as determined in the first step of the QC review process.

Eligibility Test. The first step in the error determination process is to determine whether the unit was eligible to receive benefits in the sample month. If the unit was ineligible, the error determination process is complete. The reviewer would them complete only the portions of column 2 of the computation sheet that demonstrate the unit was ineligible (thus ineligible units will often be missing some data in column 2 of the computation sheet). The allotment amount in column 2 of the last row on the computation sheet will be coded as zero since the entire amount of the coupon allotment was issued in error. If the unit is eligible, the reviewer then uses the allotment test to determine whether the unit received the correct benefits, an underissuance of benefits, or an overissuance of benefits.

Allotment Test. The allotment test consists of two comparisons, referred to as comparisons I and II. The first is a comparison of an allotment computed on the basis of the unit's actual circumstances during the budget month (as determined during the QC review) to the allotment authorized by the eligibility worker. The reviewer uses a blank column (not column 2) of the QC computation sheet to do comparison I. If the difference between the two allotment amounts is $5 or less, there is no error in the allotment amount for the sample month. The QC reviewer then records the information from comparison I in column 2 of the QC computation sheet and the error determination process is complete. If the difference between the two allotments is greater than $5, the reviewer proceeds to comparison II.

Comparison II is a comparison of the following two allotments: (1) an allotment computed on the basis of the unit's actual circumstances but excluding any variances with the original eligibility worker's findings that are allowable under FSP regulations; and (2) the allotment authorized by the eligibility worker. For

an example of an excluded variance, consider a unit whose income changed between the date when the eligibility worker authorized the coupon allotment and the date that the QC review occurred. If the unit is not required under FSP regulations to report the change in income, then for comparison II the QC reviewer is instructed to ignore the income variance and use the eligibility worker's reported income when calculating the coupon allotment that the unit should have received. The information for comparison II is then recorded in column 2 of computation sheet. If the difference between allotments (1) and (2) is more than $5, then there is an official error.

The last row of column 2 of the computation sheet shows the coupon allotment that the unit should have received. The difference between the allotment shown in column 1 (the eligibility worker's authorized allotment) and that shown in column 2 (the QC reviewer's final allotment determination) is the error amount. The QC reviewer determines whether the error amount is an underissuance or an overissuance and codes the finding accordingly.

e. Reporting the QC Results

The QC reviewer reports the error findings on the integrated review schedule (see Appendix D). The reviewer reports whether the review was completed and, if so, whether the coupon allotment for the case was correct, an underissuance, or an overissuance. The reviewer then reports the dollar amount of the error.

In addition to the error determination and the dollar amount of the error, the QC reviewer also reports all the *eligibility worker's* detailed case record information on the integrated review schedule, even if the QC reviewer disagreed with the eligibility worker's findings. The case record information includes the following:

- ***QC Review Summary:*** a unique QC review number, state and local agency codes, the sample month and year, the review date, the error findings, and the error amount

- ***General Case Information:*** the date the unit began receiving food stamps, the date the unit was last certified for benefits, and the number of months for which the unit was certified
- ***FSP Case Information*:** unit assets, unit gross and net countable income, unit expenses, and the authorized coupon allotment
- ***Detailed Person-Level Information*:** the age, race, sex, citizenship status, education level, employment status, employment and training status, relationship to the unit head, and the food stamp program affiliation of each person in the unit
- ***Detailed Income Information*:** the unit's total income broken down by the unit member receiving it, the income type, and the amount

Completed integrated review schedules are transmitted to FCS's national computer data center where the review information is entered into the IQCS database. It is from this initial database that the sample for the federal portion of the QC review is drawn.

3. Federal Re-Reviews

A second round of case reviews is undertaken by federal QC staff in FCS's regional offices. This review monitors the accuracy of the state QC review process and its application of certification and QC policy. The results of the federal re-review, when combined with the state QC results, determine the official error rate. The federal re-review entails sampling from state review files, reviewing cases, and resolving disputes over differences between federal and state findings on individual cases.

Federal re-reviews are performed for a subsample of the reviews submitted by each state's QC unit. The federal re-review sample size is based on the size of the state's review sample, as follows:

State QC Sample Size (n)	Federal Re-Review Sample Size
1,200 or more	400
300-1,999	150 + 0.277*(n - 300)
under 300	150

Note that between the lower and upper bounds of 150 and 400, respectively, the federal re-review sample size is proportional to the size of the state QC sample.

The federal re-review focuses on answering three questions about each state review case:

- Did the state reviewer apply certification policy correctly?
- Did the state reviewer apply QC review procedures properly?
- Were the recorded results and findings of the state review accurate?

The federal re-review begins with a desk review of state-reported findings and is extended, as necessary, to resolve issues. If the desk review indicates mistakes or an inadequate investigation in the state review, the next step is to verify questionable information by making telephone calls to the unit and collateral contacts as necessary. Field trips to interview the household are made if necessary. After the re-review, each completed case is classified according to whether the federal reviewer agrees with the state's finding, agrees but notes procedural deficiencies, or disagrees with the state's finding. The federal re-review arrives at a federal finding that the unit was eligible with the correct benefit amount, that the unit was totally ineligible, or that the unit was eligible with a specified amount of overissuance or underissuance.

Certain data elements from the federal review are sent to FCS's national computer data center and included in the IQCS data. These data elements include the following items: whether the federal review was completed; whether the federal reviewer found no payment error, an overissuance, an underissuance, or that the unit was totally ineligible; the amount of any errors; and whether the federal reviewer's findings concurred with the state reviewer's findings.

Using the final IQCS data with the federal re-review included, the QC system produces each state's official payment error rate on the basis of total benefits paid as overissuances (including benefits paid to ineligible units) and total benefits paid as underissuances according to the state and federal findings. Depending on how this official error rate compares with national QC system performance standards, a state

is then assessed a financial penalty for excessive error, granted a financial reward for exceptional performance, or (in most cases) neither. States with an overpayment error rate above the national average in a given year may be subject to a financial penalty, while states with a combined payment error rate (that is, overpayments plus underpayments) below six percent may be granted a financial reward.

The final IQCS data are used by FCS in a number of ways in addition to calculating official FSP payment error rates. The QC branch of FCS publishes a report each year entitled *Food Stamp Quality Control Annual Report*. This report presents each state's official payment error rate as well as detailed information on various characteristics of units with and without payment errors. An edited version of the IQCS data, called the QC database, is used by FCS to produce an annual report on the characteristics of food stamp units and as the data source for one of FCS's microsimulation models that estimates the impact on current FSP recipients of hypothetical reforms to the FSP and various welfare programs that affect the FSP.

The next chapter describes the data and methodology used to assess the quality of the IQCS data; the chapters that follow present our findings.

Table of Contents

III. DATA AND METHODOLOGY

This chapter presents the data and methodology we use to assess the quality of the IQCS data in terms of the research questions posed in chapter I of this report. Because this report is a quality profile of the IQCS data, the principal source of data for our analyses is the IQCS data itself. In addition to the IQCS data, though, our analyses also draw from two other databases: the QC database and the quality profile database. The QC database is an edited version of the IQCS data. The quality profile database, which was created specifically for this study, contains data we abstracted from a sample of actual QC review administrative case files. We describe each of these databases next. Then, we describe the methodology we use to assess the quality of the IQCS data.

A. IQCS DATA

As detailed in the previous chapter, the IQCS data are generated from monthly quality control reviews of FSP cases, which are conducted by state FSP agencies. Although the purpose of quality control reviews is to assess the accuracy of eligibility determinations and benefit calculations, certain demographic and financial data are also collected during the review to allow for various analyses of the sources and types of errors. It is these data that make the IQCS data an excellent source with which to describe the circumstances and characteristics of FSP units and participants, and it is these data that we assess in this quality profile.

To understand many of the analyses presented in the upcoming chapters of this report, it is important to keep in mind the following point about the IQCS data: except for a small number of fields relating to error findings and the value of the food stamp benefit in the sample month, the fields in the IQCS database are drawn from the *caseworker's findings*, as recorded by the state QC reviewer on the integrated review

schedule.[1] That the IQCS data contain the caseworker's findings rather than those of the state reviewer suggests that the data already contain errors because we know that a certain percentage of cases contain payment errors. This brings up the following issue, which will be important to consider when reviewing the methodology and results of this study: does caseworker payment error recorded in the IQCS data constitute error in terms of assessing the quality of the IQCS data? If we view the caseworker data for what they are intended to be--namely, the estimated household circumstances that, right or wrong, were used to assign benefits in the sample month--then discrepancies from the reviewer's findings or from the household's actual circumstances are not necessarily error. Furthermore, the actual benefits received by the household are the same as that reported in the IQCS data. If, however, we view the caseworker data as an imperfect measure of "truth," where truth is the circumstances that *should* have been ascertained by the caseworker, then discrepancies from the reviewers' findings *do* constitute error, generally, and ought to be counted as error in preparing a quality profile. Because the IQCS data are used for a variety of purposes, both perspectives are reflected in this report. In other words, we acknowledge these different views of what the IQCS data should be, and if we had sufficient research findings to estimate and decompose the "total error" in the IQCS, we would recognize the difference between the caseworker and reviewer findings as a separate component that users might or might not wish to include in the measure of error.

B. QC DATABASE

In various parts of this report we refer to the QC database as distinct from the IQCS data. The QC database is simply the IQCS data after being modified slightly and edited for consistency. The QC database is used as the input to FCS's QC Minimodel microsimulation model and as the data source for FCS's annual publication entitled *Characteristics of Food Stamp Households*. The creation of the QC

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[1]Oregon recently began to enter the state QC reviewer's findings rather than the original caseworker's findings in the integrated review schedule.

database from the IQCS data involves four steps: (1) preliminary processing, (2) data editing, (3) variable construction, and (4) weighting.

1. Preliminary Processing

The IQCS data first undergo a series of quality control procedures whereby the frequency distributions for the values of each variable on the file are inspected for data problems. Data values that are out of range, missing from the file, or coded as unknown on the source file are given specific missing value codes. Cases coded as having incomplete QC reviews are removed from the file.[2]

2. Data Editing

It is important to ensure that the various measure of unit size, income, and benefits on the QC database are consistent, since inconsistencies are fairly common in the IQCS data and are very troublesome for analytic purposes, particularly in analyses of program changes. The editing process for the IQCS data determines whether the values recorded for a case are consistent. The edits performed if a case is not consistent are fairly complex; they are described in more detail in the next chapter.

3. Variable Construction

After the editing of the file is complete, a number of variables are constructed from the reported data. The major classes of constructed variables are unit-level income, FSP eligibility and benefit determination, characteristics flags, and geographic region. A brief description of each general class of constructed variables is as follows:

- ***Unit-level income variables.*** The total FSP unit income of a particular type is constructed by summing the person-level income of that type over all persons in the FSP unit.

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[2]Cases with incomplete reviews are identified by STAT-DISP not equal to 1, where the value 1 indicates that the review was completed.

- ***FSP eligibility and benefit determination variables.*** Variables such as FSP unit deductions, FSP unit net countable income, and FSP unit benefits are constructed on the basis of unit income and demographic characteristics.

- ***Characteristics flags.*** Flags are created to identify units with characteristics such as the presence of an elderly or disabled person or the presence of child.

- ***Geographic region variables.*** On the basis of state and county codes in the IQCS data, units are classified by the Census Bureau region in which they reside, by the FSP region in which they reside, and by the whether the unit resides in an urban or rural area.[3]

Some of these variables are created so that the correct FSP benefit can be calculated, while others are created to make it easier to tabulate the characteristics of common subgroups of the FSP population.

4. Weighting

The original weights on the file, which are simply the inverses of the sampling fractions, are adjusted proportionally so that they replicate, by state, the monthly number of FSP units as reflected in the program operations data. Program operations statistics are derived from FCS's National Data Bank and reflect actual levels of participation and benefit issuance. Thus, by construction, the weighted number of units on the QC database matches program operations figures on the actual number of FSP units. This adjustment is done only at the unit level. The QC database does not have a person-level weight. Estimates of the number of FSP participants may be derived by applying the unit weights to the number of participants in each unit, but these estimates will not necessarily match program operations totals.[4]

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[3]The Census Bureau classifies all states into four regions while the FSP classifies all states into seven regions.

[4]Sampling error will cause random differences between QC database estimates of the number of FSP participants and the actual number of FSP participants as reported in program operations data. Nevertheless, the QC database consistently overestimates the number of FSP participants and consistently underestimates total FSP benefits. The discrepancies are small in magnitude from year to year but consistent in their direction. A detailed discussion of this anomaly and its possible causes is presented in Chapter 5 of this report and in Stavrianos (1996). FCS is currently working to develop weights for the QC database so that the number of households, persons, and benefits on the file match administrative data.

C. QUALITY PROFILE DATABASE

One of the research questions posed in the first chapter of this report is what are the causes of the inconsistencies that we observe in the IQCS data? The methodology that we use to answer this question, which will be introduced below, requires comparing IQCS data for a sample of households with the actual data that we abstracted from these households' QC review administrative case files. The data we abstracted were entered into a database we call the "quality profile database." A description of the quality profile database follows.

We abstracted data from a sample of administrative case files containing the detailed findings of the state and federal reviews. The probability sample of 574 case files was drawn from four of the seven FCS regions and was stratified by a combination of consistency status and payment error status.[5] A brief description of the data contained in these QC review administrative case files will clarify aspects of the analyses that we conduct using the file.

The QC review administrative case files contain the documents the original caseworker used to determine the unit's eligibility and benefits, the documents the state QC reviewer used to assess whether the caseworker determined the unit's eligibility and benefits correctly, and, finally, the documents the federal re-reviewer used to establish whether the state QC reviewer assessed the caseworker's file correctly.

We abstracted the following data from the state and federal QC reviewer documents contained in the case files:

> ***Caseworker's Findings.*** From the Integrated Review Schedule (IRS), the QC review worksheet, and the computation sheet we abstracted data detailing the caseworker's findings for the case as recorded by the state QC reviewer.[6]

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[5]The design of the sample is described Appendix E.

[6]The Integrated Review Schedule is shown in Appendix D, the QC review worksheet is shown in Appendix B, and the computation sheet is shown in Appendix C.

State QC Reviewer's Findings. From the QC review worksheet and the computation sheet we abstracted data detailing the state QC reviewer's findings for the case. These data will differ from the caseworker's findings to the extent that the caseworker made errors in determining eligibility and benefits for the case.

Federal Reviewer's Findings. From the federal reviewer's notes on the state QC reviewer's worksheet and computation sheet, we abstracted data detailing the federal reviewer's findings for the case.

We entered the abstracted data into a database--the quality profile database. Each record was identified by its state code and "review number," which are also reported in the IQCS database. The combination of review number and state code is unique in the IQCS database. (We had used these codes to designate the sample cases.) Maintaining the codes on the database of abstracted items enabled us to link the abstracted data to the IQCS database.

D. METHODOLOGY

Recall from Chapter I that this quality profile will address the following research questions:

- To what extent do the IQCS data have internal inconsistencies? What are the causes of these inconsistencies and to what extent do these inconsistencies affect the quality of the IQCS data for FSP research? Finally, how should these inconsistencies be reconciled in the IQCS editing process?
- To what extent does sampling error affect the quality of the IQCS data?
- To what extent do various types of nonsampling error affect the quality of the IQCS data?
- Are the IQCS asset data reliable?
- To what extent do the characteristics of FSP participants as reported in sample survey data differ from the characteristics of FSP participants as reported in IQCS data? What do these differences suggest about the quality of the IQCS data?
- What are the implications of IQCS data error for the calibrating of FCS's MATH® CPS microsimulation model?

In this section we briefly introduce the methodology and data that we use to address these questions. More detailed descriptions of the methodology are presented as each question is addressed in the next two chapters.

We begin our analyses of inconsistencies in the IQCS data by calculating the incidence of internal inconsistencies in the 1993 IQCS data. Then, we evaluate the extent to which the practice of entering the uncorrected, original caseworker data in the IQCS database (as opposed to the corrected reviewer's data) contributes to inconsistencies. We do this by comparing the original caseworker's data with the federal reviewer's data for the sample of QC review administrative case files in the quality profile database developed for this report. We discuss the reasons that a substantial number of cases appear to be inconsistent; give suggestions as to how the IQCS data editing process should be changed; provide an assessment of what inconsistencies mean in terms of the overall quality of the data; and, lastly, provide suggestions for further studies that might shed more light on the sources of inconsistencies.

We assess the quality of the data in terms of sampling error by discussing how sampling theory suggests that IQCS data are affected by sampling error. For nonsampling error, we discuss the various types that affect both the IQCS data as well as the QC database. Specifically, we discuss whether sample selection, editing, and weighting procedures used in the IQCS data and the QC database produce a file that is truly representative of the food stamp population in a given year and whether transcription and data entry error contribute significantly to errors in the IQCS data.

A frequently voiced belief is that the asset data in the IQCS are unreliable--specifically, that assets are underreported. We assess the quality of the asset data by comparing the original caseworker's data with the federal reviewer's data for the sample of QC review administrative case files in the quality profile database developed for this report.

To document what has been shown previously about the extent to which the characteristics of FSP participants as reported in sample survey data differ from the characteristics of FSP participants as reported

in IQCS data, we present findings from Carlson and Dalrymple (1986). Then, using the quality profile database developed for this report, we compare the caseworker's data with the federal reviewer's data for the characteristics in the IQCS that Carlson and Dalrymple found to differ most from sample survey data, and we infer from this comparison whether caseworker error contributes to the differences between IQCS and sample survey data.

FCS's MATH® CPS microsimulation model is "calibrated" on the basis of food stamp participant characteristics as shown in the IQCS data. The calibration process produces FSP participation probabilities that, when applied to households simulated to be eligible for the FSP, will ensure that the characteristics of the baseline FSP population in the model match closely what is known about the actual FSP population. This calibration will be affected by IQCS errors in those participant characteristics. To assess the implication of this error for the calibrating of FCS's MATH® CPS microsimulation model, we used the quality profile database to compare the caseworker's data with the federal reviewer's data for the characteristics in the IQCS that are used to calibrate the MATH® CPS model.

In the next two chapters--chapters IV and V--we present our findings for the above analyses. Findings with respect to internal consistency are detailed in chapter IV; and findings with respect to all of the other analyses discussed above are presented in chapter V.

IV. IQCS QUALITY: DATA CONSISTENCY

In this chapter we assess the quality of IQCS data in terms of data consistency. Internal consistency is an important measure of data quality and one that requires no external validation. Internal inconsistencies are fairly common in the IQCS data and are very troublesome for analytic purposes, particularly in analyses of program changes. Inconsistencies are further troubling because key relationships that do not hold true suggest that the data may not be accurate. Indeed, the data quality concerns raised by frequent inconsistencies among key variables in the IQCS data was a major impetus for this study.

We begin by discussing several measures of internal consistency among variables in the IQCS data and how the current editing process ensures that these measures of consistency are satisfied in the QC database. Next we review the incidence of inconsistencies among key variables in the 1993 IQCS data. Then, we evaluate the extent to which the practice of entering the uncorrected, original caseworker data in the IQCS database contributes to inconsistencies. We do this by comparing the original caseworker's data with the federal reviewer's data for the sample of QC review case files in the quality profile database that we created for this study. We discuss the reasons that a substantial number of cases appear to be inconsistent. We then give suggestions as to how the IQCS data editing process should be changed to reconcile inconsistencies in ways that address their sources. We conclude with an assessment of what inconsistencies mean in terms of the overall quality of the data, and we provide suggestions for further studies that might shed more light on the sources of inconsistencies.

A. VARIABLE CONSISTENCY AND THE IQCS DATA EDITING STRATEGY

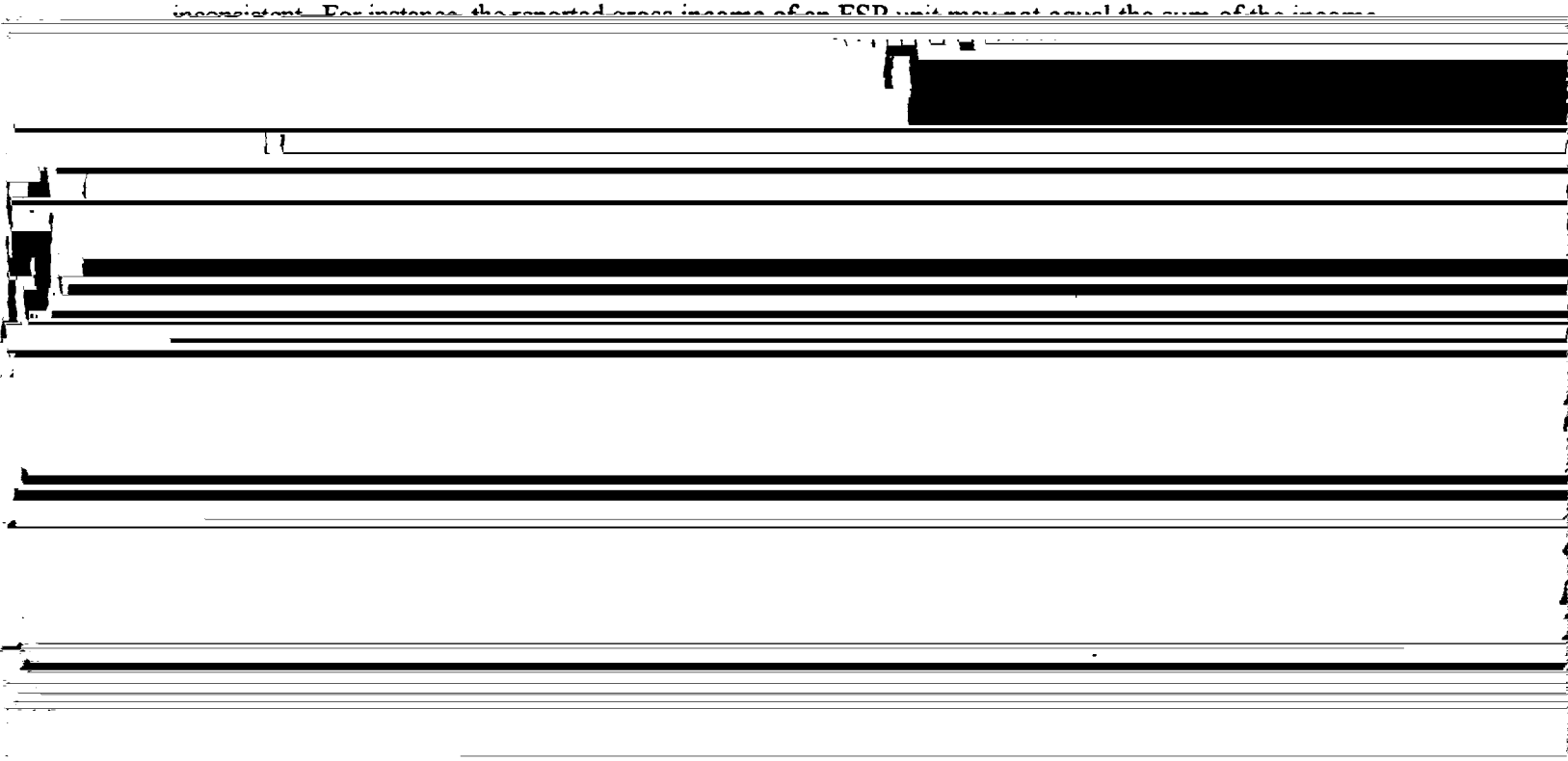
There are several ways to obtain measures of unit size, income, and benefits using IQCS data. Consider the following examples:

- Unit size can be measured by its reported value or by summing the number of persons in the household affiliated with the FSP unit.

- Gross income--a common measure of an FSP unit's income--can be measured by its reported value or by summing the reported income of each person in the FSP unit.

- Net income and FSP benefits can be measured by reported values or calculated on the basis of the various measures of gross income, deductions, and unit size.

Surprisingly often, the alternative measures of a particular characteristic in the IQCS data are inconsistent. For instance, the reported gross income of an FSP unit may not equal the sum of the income



of each person in the unit. Anderson and Spencer (1990) documented the appearance of inconsistencies among two or more items in about half the sample in 1986 and inconsistencies among three items--gross income, net income, and benefit amount--in 29 percent the sample. Such inconsistencies need to be corrected before the IQCS data are used for analyses, otherwise the results of basic reform simulations or tabulations would vary depending on which of the alternative versions of a characteristic an analyst chose to utilize. Therefore, it is important for analyses of food stamp units that key variables in the IQCS data--variables that measure unit size, income and benefits--are internally consistent.

The overall strategy behind the IQCS data editing process--a key step in the conversion of the IQCS data to the QC database--is to ensure that certain basic relationships hold for all cases. For example:

- Excess shelter deduction must equal shelter costs above 50 percent of gross income minus all other deductions up to a cap. Units that contain elderly or disabled members are not subject to the cap.

- Total deductions must equal the sum of the standard deduction, earned income deduction, medical deduction, excess shelter deduction, and dependent care deduction.

The process by which the editing program determines whether a case is consistent, and the edits performed if it is not, is designed so that the above relationships hold true for all cases. Cases for which the relationships do not hold true initially have their data edited according to a fairly complex algorithm that tries to determine the likely true value of each particular measure that is inconsistent. Next we examine the incidence of various inconsistencies in the IQCS data.

B. INCIDENCE OF INCONSISTENCIES IN IQCS DATA

In the 1993 IQCS data, we tabulated the consistency rates of four basic relationships that are crucial to calculating a food stamp unit's eligibility and benefit level:

(1) Gross income: reported gross income versus constructed (constructed = the sum of all person level income)

(2) Earned income deduction: reported earned income deduction versus constructed (constructed = 0.2 times person-level earnings)

(3) Net income: reported net income versus constructed (constructed = reported gross income minus calculated deductions)

(4) FSP benefit: reported FSP benefit versus constructed (constructed = FSP benefit implied given reported net income and unit size)

For these relationships, we consider only differences of more than $5 to be inconsistent. Also, we examine only cases with completed state QC reviews since these are the cases that are included in the QC database.

Of the 57 thousand cases with completed state reviews in the 1993 IQCS data, 17 percent fail the gross income consistency test, 2 percent fail the earned income deduction consistency test,[1] 16 percent fail the net income consistency test, and 10 percent fail the FSP benefit consistency test (Table IV.1). In all, 35 percent of all cases fail at least one of the four consistency tests, 9 percent of all cases fail 2 or more consistency tests, and 1 percent of all cases fail 3 or more consistency tests. There is some regional variation in the incidence of inconsistencies. Among the seven FCS regions, the percentages failing one or more tests varied from a low of 21 percent in the Southeast region to a high of 48 percent in the Western region. Most of the variation between regions is explained by variation in the consistency of the gross income test. In two regions (Southeast and Southwest) only 4 percent of the cases fail the gross income consistency test while in two other regions (Midwest and Western) almost 30 percent of the cases fail the gross income consistency test.

For each consistency test the distribution of inconsistent cases by whether the reported value of the variable is greater than or less than the constructed value is presented in Table IV.2. The reported values for gross income, the earned income deduction, and net income are *less than* the constructed values: the reported value is less than the constructed for 78 percent of the gross income inconsistent cases, 57 percent of the earned income deduction inconsistent cases, and 77 percent of the net income inconsistent cases. For slightly more than half the cases for the FSP benefit consistency test, though, the reported value is *greater than* the constructed value (52 percent versus 48 percent).[2]

There is regional variation in whether the reported value of these variables is greater than or less than the constructed values. For example, although for 78 percent of all cases the reported value of gross

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[1]Of units with reported earnings or a reported earned income deduction (12,967), 10 percent (1,316) fail the earned income deduction consistency test.

[2]Because benefits are constructed for this analysis on the basis of reported net income rather than constructed net income, *it does not follow* that if the reported values of income are often greater than the constructed values, then the reported FSP benefits should often be *less* than the constructed benefits.

TABLE IV.1

SUMMARY OF INCONSISTENCIES ON THE 1993 IQCS FILE BY REGION

	Total		Northeast		Mid-Atlantic		Southeast		Midwest		Southwest		Mt. Plains		Western	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Reported Value Not Equal to Constructed (Pcts. are of Total Cases)																
Gross Income	9,555	16.8	1,425	24.4	1,003	13.9	366	3.8	3,018	28.6	280	4.5	924	10.7	2,539	29.6
Earned Income Ded.	1,316	2.3 *	113	1.9	149	2.1	122	1.3	260	2.5	143	2.3	287	3.3	242	2.8
Net Income	9,022	15.9	848	14.5	1,155	16.0	1,223	12.6	1,929	18.3	1,007	16.0	1,285	14.9	1,575	18.3
FSP Benefit	5,866	10.3	686	11.7	594	8.2	843	8.7	980	9.3	672	10.7	871	10.1	1,220	14.2
Total Inconsistent Cases	20,087	35.3	2,566	43.9	2,347	32.6	2,072	21.4	4,729	44.7	1,680	26.7	2,582	29.9	4,111	47.9
with 2+ Inconsistencies	5,033	8.9	449	7.7	497	6.9	462	4.8	1,297	12.3	374	5.9	699	8.1	1,255	14.6
with 3+ Inconsistencies	667	1.2	68	1.2	62	0.9	46	0.5	154	1.5	48	0.8	81	0.9	208	2.4
Total Cases	56,832	100.0	5,847	100.0	7,202	100.0	9,691	100.0	10,568	100.0	6,291	100.0	8,646	100.0	8,587	100.0

NOTE: Inconsistencies of $5 or less are coded as equal.

* Of units with reported earnings or a reported earned income deduction (12,967), 10 percent (1,316) have a reported value not equal to constructed.

SOURCE: 1993 IQCS database.

TABLE IV.2

ANALYSIS OF INCONSISTENCIES ON THE 1993 IQCS FILE BY TYPE AND REGION

	Total		Northeast		Mid-Atlantic		Southeast		Midwest		Southwest		Mt. Plains		Western	
	No.	Ptc.	No.	Ptc.	No.	Ptc.	No.	Ptc.	No.	Ptc.	No.	Ptc.	No.	Ptc.	No.	Ptc.
Gross Income																
Reported > Constructed	2,116	22.1	252	17.7	183	18.2	192	52.5	448	14.8	171	61.1	374	40.5	496	19.5
Reported < Constructed	7,439	77.9	1,173	82.3	820	81.8	174	47.5	2,570	85.2	109	38.9	550	59.5	2,043	80.5
Total Inconsistent Cases	9,555	100.0	1,425	100.0	1,003	100.0	366	100.0	3,018	100.0	280	100.0	924	100.0	2,539	100.0
Median Abs. Diff.	68	-	53	-	43	-	141	-	18	-	114	-	104	-	114	-
Earned Income Deduction																
Reported > Constructed	562	42.7	31	27.4	42	28.2	53	43.4	99	38.1	85	59.4	128	44.6	124	51.2
Reported < Constructed	754	57.3	82	72.6	107	71.8	69	56.6	161	61.9	58	40.6	159	55.4	118	48.8
Total Inconsistent Cases	1,316	100.0	113	100.0	149	100.0	122	100.0	260	100.0	143	100.0	287	100.0	242	100.0
Median Abs. Diff.	68	-	84	-	86	-	74	-	74	-	72	-	50	-	59	-
Net Income																
Reported > Constructed	2,101	23.3	152	17.9	405	35.1	308	25.2	437	22.7	233	23.1	215	16.7	351	22.3
Reported < Constructed	6,921	76.7	696	82.1	750	64.9	915	74.8	1,492	77.3	774	76.9	1,070	83.3	1,224	77.7
Total Inconsistent Cases	9,022	100.0	848	100.0	1,155	100.0	1,223	100.0	1,929	100.0	1,007	100.0	1,285	100.0	1,575	100.0
Median Abs. Diff.	75	-	106	-	99	-	64	-	73	-	59	-	76	-	71	-
FSP Benefit																
Reported > Constructed	3,022	51.5	464	67.6	252	42.4	425	50.4	521	53.2	278	41.4	410	47.1	672	55.1
Reported < Constructed	2,844	48.5	222	32.4	342	57.6	418	49.6	459	46.8	394	58.6	461	52.9	548	44.9
Total Inconsistent Cases	5,866	100.0	686	100.0	594	100.0	843	100.0	980	100.0	672	100.0	871	100.0	1,220	100.0
Median Abs. Diff.	33	-	28	-	33	-	35	-	30	-	30	-	31	-	38	-

NOTE: Inconsistencies of $5 or less are coded as equal.

SOURCE: 1993 IQCS database.

income is less than the constructed value, in the Southwest region the reported value is less than the constructed value for only 39 percent of the inconsistent cases.

Among cases with an inconsistency, the median absolute difference between the reported and constructed values is also presented in Table IV.2. The median absolute differences for all cases range from a low of $33 for the FSP benefit consistency test to a high of $75 for the net income consistency test. There is regional variation in these measures as well. The median absolute difference between the reported and constructed values for gross income in the Midwest region is $18 versus $141 in the Southeast region.

Inconsistencies are only somewhat more prevalent among cases with reported payment errors: 38 percent of the 14 thousand cases with a payment error have one of the 4 inconsistencies above versus 34 percent of the 43 thousand cases without a payment error (Table IV.3). This unexpected finding suggests that the bulk of inconsistencies are not attributable to cases with payment errors (recall that such cases are entered into the IQCS database with the errors included). Our analysis of a sample of QC review case files will shed some light on why cases with payment errors do not contribute very disproportionately to the occurrence of inconsistencies.

C. IQCS DATA VERSUS STATE AND FEDERAL QC REVIEWER FINDINGS

A hypothesis with which we began this study is that many of the inconsistencies in the IQCS data occur because these data contain the original caseworker's findings, errors and all, rather than the corrected state or federal reviewers' findings. The discovery that inconsistencies are not substantially more prevalent in cases with payment errors than in cases without suggests that inconsistencies do not arise solely or even primarily because the IQCS data contain the caseworker's findings. In an attempt to explain this phenomenon, to determine whether the state and federal reviewers' findings exhibit any greater consistency than the caseworkers' findings, and to gather evidence that might contribute to a better understanding of the sources of inconsistencies, we compared the incidence of inconsistencies in the caseworker's data with

Table of Contents

TABLE IV.3

DISTRIBUTION OF ALL CASES BY PAYMENT ERROR AND CONSISTENCY STATUS

	Total		Northeast		Mid-Atlantic		Southeast		Midwest		Southwest		Mt. Plains		Western	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Cases without a Payment Error																
Inconsistent Cases	14,663	34.4	2,022	43.0	1,681	31.2	1,493	21.5	3,248	42.4	1,247	26.5	1,929	29.1	3,043	46.4
Consistent Cases	27,903	65.6	2,675	57.0	3,701	68.8	5,453	78.5	4,404	57.6	3,464	73.5	4,689	70.9	3,517	53.6
Total	42,566	100.0	4,697	100.0	5,382	100.0	6,946	100.0	7,652	100.0	4,711	100.0	6,618	100.0	6,560	100.0
Cases with a Payment Error																
Inconsistent Cases	5,424	38.0	544	47.3	666	36.6	579	21.1	1,481	50.8	433	27.4	653	32.2	1,068	52.7
Consistent Cases	8,842	62.0	606	52.7	1,154	63.4	2,166	78.9	1,435	49.2	1,147	72.6	1,375	67.8	959	47.3
Total	14,266	100.0	1,150	100.0	1,820	100.0	2,745	100.0	2,916	100.0	1,580	100.0	2,028	100.0	2,027	100.0

NOTE: Inconsistencies of $5 or less are coded as equal.

SOURCE: 1993 IQCS database.

that of the federal QC reviewer's data using the quality profile database which we created specifically for this report and which is described in detail in the previous chapter.

We chose to use the federal QC reviewer's data as the object of comparison for this evaluation because the federal reviewer's data were likely to have the fewest errors, given the process by which these data are generated. The federal re-review is not an independent review; nor was it intended to be one. As we explained earlier, the federal re-review begins with the state reviewer's file, and thus it builds on the findings of both the caseworker and the state reviewer. The federal reviewer's data is the best measure of "truth" on the file, where truth is defined as the unit's actual circumstances and the FSP benefit that *should have* been awarded in light of those circumstances.[3]

We compared the caseworker's findings with those of the federal reviewer for three of the four consistency tests above: (1) the gross income the consistency test, (2) the earned income deduction consistency test, and (3) the FSP benefit consistency test. We did not conduct the net income consistency test for these data because calculating the FSP deductions necessary to perform the test is both difficult and subject to error. The IQCS data contain reports of expenses but not deductions. With no reason to anticipate that the findings would differ in substance from those obtained with the other three tests, we did not believe that the additional resources required to perform the net income consistency test were justified.

Our findings do not support the hypothesis that many of the inconsistencies in the IQCS data occur because the data contain the original caseworker data, errors and all, rather than corrected state or federal data. Table IV.4 presents the percentage of cases with an inconsistency on each of the three tests for the

[3]Recall, however, that federal re-reviews are performed for only a subsample of the IQCS sample. If the IQCS database were redesigned to substitute reviewers' findings for caseworker findings, the state rather than federal findings would become the source of reported household resources, expenses, and demographic characteristics.

TABLE IV.4

INCONSISTENCY RATE OF IQCS DATA AND
OF ABSTRACTED CASEWORKER, STATE, AND FEDERAL DATA
(Entries are Weighted Percentages of Sampled Cases with an Inconsistency)

	IQCS Data	Abstracted Data		
Consistency Check	Caseworker	Caseworker	State Reviewer	Federal Reviewer
Gross Income	18	18	32	31
Earned Income Deduction	2	2	10	11
FSP Benefit	9	8	10	10

SOURCE: 1993 IQCS database and data abstracted from a sample of administrative case files drawn from the 1993 IQCS database.

NOTES: The IQCS data presented here correspond to the same 574 households as the abstracted data.

abstracted caseworker data and federal reviewer data.[4] Compared with the caseworker data, the federal data show a much higher rather than lower percentage of cases with an inconsistency for both the gross income consistency test (31 percent versus 18 percent) and the earned income deduction consistency test (11 percent versus 2 percent), and a *somewhat* higher percentage of cases with an inconsistency for the FSP benefit consistency test (10 percent versus 8 percent). Given the earlier finding that the incidence of inconsistencies is barely higher for cases with payment errors than for those without errors, we would not have been surprised to find that the federal data were no more consistent than the caseworker data. We did not anticipate, though, that the federal data would be much *less* consistent than the QC reviewer data.

Table IV.5 reports the same comparisons as Table IV.4 but at the regional level. In general, these results mirror those found over the four regions as a whole, but there are striking regional differences. For the gross income test the federal inconsistency rates, while all larger than their caseworker counterparts, vary over a smaller range--26 percent to 39 percent--than do the caseworker consistency rates, which range from 3 percent to 34 percent. In the West and Midwest regions, where the inconsistency rates for the caseworker data are high, the inconsistency rates for the federal data are only modestly higher. In the other two regions, however, the inconsistency rates for the federal data, while lower than the corresponding rates in the West and Midwest, are substantially higher than the inconsistency rates for the caseworker data. For the FSP benefit test we again find that the inconsistency rates for the federal reviewer data vary over a smaller range--8 percent to 11 percent--than do the inconsistency rates for the caseworker data, at 5 percent to 10 percent, but the federal data are only slightly more inconsistent than the caseworker data. For the earned income deduction test, which has the lowest rates of inconsistency for the caseworker data, we find correspondingly low rates of inconsistency in the federal data in all but the Southeast region. If not for the

[4]Also included in Table IV.4 are (1) the rate of inconsistency in the IQCS data for the sampled cases and (2) the rate of inconsistency in the state QC reviewer data. The inconsistency rates in the IQCS data closely match those found in the abstracted caseworker data because it is the caseworker data that are supposed to be entered in the IQCS database.

TABLE IV.5

INCONSISTENCY RATE BY REGION OF IQCS DATA AND
OF ABSTRACTED CASEWORKER, STATE, AND FEDERAL DATA
(Entries are Weighted Percentages of Sampled Cases with an Inconsistency)

	IQCS Data	Abstracted Data		
Consistency Check	Caseworker	Caseworker	State Reviewer	Federal Reviewer
Gross Income				
Mid-Atlantic	13	13	37	26
Southeast	3	3	26	27
Midwest	34	34	37	39
West	26	24	30	31
Earned Income Deduction				
Mid-Atlantic	1	1	5	5
Southeast	1	<1	20	20
Midwest	2	2	6	7
West	5	5	6	7
FSP Benefit				
Mid-Atlantic	5	5	7	8
Southeast	10	10	12	11
Midwest	6	7	7	10
West	12	9	13	10

SOURCE: 1993 IQCS database and data abstracted from a sample of administrative case files drawn from the 1993 IQCS database.

NOTES: The raw data presented here correspond to the same 574 households as the abstracted data.

finding in this one region, it would again be true that the inconsistency rates for federal data, while higher than those for the caseworker data, show less variation across regions.

Why would the federal data, which supposedly provide the best measure of a unit's actual circumstances, be even more inconsistent than the caseworker data, which supposedly represent the weakest of the three measures? After examining the abstracted data, the actual case files, and the IQCS data for a number of individual cases, we drew two conclusions. First, the difficulty of abstracting the federal (and state) reviewers' data from worksheets that were not designed for this purpose contributed to errors that inflate the measured rates of inconsistency--particularly those for the gross income and earned income tests, which utilize person-level data. Second, what appear to be inconsistencies in the caseworker data often have other explanations. Complexities in the determination of countable income and the derivation of benefit amounts, rather than errors, appear to account for many of the observed inconsistencies. With more sophisticated consistency tests, sometimes requiring information that is not collected in the IQCS data, the observed rates of inconsistency would be lowered--perhaps substantially.

We cannot quantify fully the impact of either of these two findings. To do so would require a rather different type of case record study than the one we performed, and we describe such a study later. Nor can we explain why the factors that our consistency tests do not take into account should vary so widely across regions. This, too, would require a different type of study. In the remainder of this section and in Section D, however, we review our findings in more depth. We begin, in this section, by examining what we learned about the difficulty of abstracting correctly the detailed findings of the federal (and state) reviewers.

The gross income and earned income consistency tests, both of which rely on person-level income data, show greater differentials between the abstracted federal and caseworker data than does the FSP benefit consistency test, which does not require the person-level income data. We analyzed more closely

the abstracted data to determine if, in fact, it was the difficulty of abstracting person-level income data from the reviewers' worksheets that made the federal data more inconsistent than the caseworker data.

We examined the federal data of cases for which the caseworker gross income data are fully consistent (that is, the reported gross income equals the constructed) and for which there are no reported payment errors. For these cases, we would expect to find that both the federal reported and constructed values of gross income are equal to the caseworker values for gross income. In fact, however, the abstracted federal values are *not* always equal to the caseworker values. In 9 percent of the cases the federal *reported* value for gross income does not equal the caseworker value. More importantly, the federal *constructed* value for gross income diverges from the caseworker value in 19 percent of the cases. Thus it appears that (presumed) errors in the abstraction of the federal data--particularly person-level income data--contribute substantially to the higher rates of inconsistency found in the federal data than the caseworker data.

Why is it more difficult to abstract federal data, and in particular person-level income data, from the administrative case files than it is to abstract caseworker data? The federal data for person-level income are usually obtained from the federal reviewer's notes on the QC review worksheet. These notes are handwritten, may not be complete, or may contain information that the reviewer later determines to be irrelevant to the FSP benefit determination. In short, the abstractor not only has to find the federal reviewer's data on the worksheet but also has to interpret that data. The unit-level federal data, on the other hand, are somewhat easier to abstract because most of it comes from the QC review worksheet, which is essentially a coding form with labeled cells. In most cases the abstractor need only find the correct cell.

Although it is generally easier to abstract unit-level federal data than it is to abstract person-level federal data, abstracting the unit-level data can also be tricky at times. Recall from Chapter 2 that cases with retrospective eligibility or benefit determinations may have more than one column of data entered in the QC review computation sheet--one column for the budget month and one for the issuance month. Also

recall from Chapter 2 that cases that fail the comparison I allotment test will also have a comparison II allotment test on the computation sheet. An abstractor, when confronted with such a case, must understand the FSP regulations well enough to identify the correct column from which to abstract the data. Considering that caseworkers themselves sometimes do not use the correct budgeting systems, for example, it is understandable that abstractors may be confused as to which data to abstract. This problem of multiple columns of data appearing on the QC review computation sheet may explain, in part, why the federal reported value for gross income differs from the caseworker's value of gross income in 9 percent of the cases where the caseworker gross income data are fully consistent and there are no reported payment errors.

Abstraction of the state reviewers' findings was much more straightforward, in theory, and yet these data show the same levels of inconsistency as the federal findings. To capture state findings, the data collection protocol instructed the abstractors to copy items from very specific locations (Sonnenfeld et al. 1995). For example, the state reviewers' findings for most of the determinants of eligibility and benefit amounts were to be taken from column 2 on the QC computation sheet, which is labeled "Final SAQC Determination" (see Appendix C). Transcription errors should have been rare except when the indicated column on the computation sheet was blank. In this event, the abstractors were instructed to retrieve the data elements from the worksheet instead.

As explained in Chapter 2, the reviewers may enter preliminary findings in columns 3 through 5 of the computation sheet, but they are instructed (in Handbook 310) to copy or enter their final determination into column 2. This extra step, however, is not a critical path in the review. To determine the final payment status, the reviewer needs to know, simply, which of columns 3 through 5 contains the final determination.

It would appear from the high levels of inconsistency in the state findings that the column designated Final SAQC Determination often *was* blank, leaving the abstractors to capture items from the worksheet

instead (see Appendix B). As we have mentioned, abstracting items from the worksheet is more difficult than abstracting items from the computation sheet. Moreover, if the budget month differed from the issuance month (see Chapter 2), abstracting data from the worksheet would have introduced a potential source of error. Unlike the computation sheet, where there are separate columns for recording the data for different budgeting systems, the worksheet includes alternative budget month and issuance month values in the same column. Alternative budget month and issue month values are distinguished not by location but by the reviewer's annotations, which are not standard across reviewers.

Unlike the federal and state data, the caseworker data are easy to abstract, for most of the items come primarily from the IRS, the coding form from which data are entered in the IQCS database. To abstract these data accurately requires nothing more than finding the correct cell on the IRS form.

To summarize, our analysis of a sample of administrative case files is inconclusive as to whether errors in caseworker data cause a substantial portion of the inconsistencies that we observe in the IQCS data. Potential findings are confounded by the high number of inconsistencies in the federal and state data that are attributable to the difficulty of abstracting these data. The best evidence regarding the impact of caseworker error may lie in the finding that inconsistencies are only slightly more prevalent in cases with payment errors than in cases without such errors.

Although the analysis of the sample of administrative case files did not answer the question as to whether errors in caseworker data cause a substantial portion of the inconsistencies in the IQCS data, the analysis did provide us with valuable information as to other causes of inconsistencies. Indeed, these other causes may themselves explain a substantial portion of the inconsistencies on the file.

D. OTHER SOURCES OF INCONSISTENCIES

As was mentioned earlier, although the analysis of the sample of administrative case files does not answer the question as to whether errors in caseworker data cause a substantial portion of the inconsistencies observed in the IQCS data, the analysis did provide us with valuable information as to

other causes of inconsistencies. Those other causes, which may themselves explain a substantial portion of the inconsistencies on the file, are described next.

Previously, we alluded to evidence that our consistency checks are not sophisticated enough to account for the various and legitimate ways that complex FSP data can be reported. The problem with the consistency checks will become clearer with the discussion of prorated benefits, the first of five other causes of inconsistencies that we identified in our analysis of the administrative case files and present here. Following the discussion of how prorated benefits cause inconsistencies, we discuss the possible roles of benefit adjustments for reductions or recoupments, income of persons not in the FSP unit, the difficulty of constructing net income, and the mission of the QC reviewer.

1. Prorated Benefits

In the month that a unit first begins to receive FSP benefits, which is known as the "opening month," the unit may not receive the full amount of the monthly benefit for which it is certified; instead, it may receive a prorated benefit. A prorated benefit is reduced by the fraction of days in the opening month that preceded the day the case was certified. For example, a unit certified on the 15th day of the month to receive a monthly allotment of $150 will receive only one-half of that allotment, $75, in the first month.

Units that are selected for a QC review in their opening month may have received a prorated FSP benefit. Our examination of case records for units with prorated benefits revealed that the QC reviewer reports in the IQCS data the income and expenses for the entire month, but then reports only the prorated amount of the FSP benefit. Because there is no field in the IQCS data stating whether a unit received a prorated benefit, these units may appear to have a reported FSP benefit that is too low given their reported income and expenses.

What fraction of the inconsistencies between the reported and constructed FSP benefits could be caused by prorated benefits? Of the 5,866 cases with an inconsistent FSP benefit, 2,844 (49 percent) have a reported FSP benefit that is too low given their reported income and expenses (Table IV.6). Of these

Table of Contents

TABLE IV.6

DISTRIBUTION OF CASES WHERE REPORTED FSP BENEFIT DOES NOT EQUAL CONSTRUCTED
BY WHETHER REVIEW MONTH EQUALS OPENING MONTH

	Review Month Equals Opening Month				Review Month NOT Equal Opening Month				Total	
	Number	% All	Row %	Col. %	Number	% All	Row %	Col. %	Number	Col. %
Reported > Constructed	92	1.6	3.0	6.0	2,930	49.9	97.0	67.7	3,022	51.5
Reported < Constructed	1,447	24.7	50.9	94.0	1,397	23.8	49.1	32.3	2,844	48.5
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NOTE: Inconsistencies of $5 or less are coded as equal.

SOURCE: 1993 IQCS database.

cases, 1,447 (51 percent) were selected for a QC review in their opening month. These are the cases for which prorating may account for the inconsistency, but their number represents an upper bound. In other words, no more than one-quarter (1,447) of the cases with inconsistent reported and constructed benefits can be explained by prorating. At least three-quarters of the inconsistent cases remain unexplained, then.

2. Benefit Adjustments for Reductions or Recoupments

The reported food stamp benefit to which an FSP unit is entitled may appear inconsistent given reported income and expenses if the FSP unit is subject to a benefit adjustment in the sample month because, like prorated benefits, benefit adjustments are not recorded in the IQCS data. Benefit adjustments, which can be either a reduction or recoupment of benefits, can occur for a number of reasons. For example, recoupments can occur because of an underpayment or an improper denial of benefits in a previous month, and reductions can occur because of an overpayment or penalty for fraud in a previous month.

3. Income of Persons Not in the FSP Unit

One of the relationships that is expected to hold in the IQCS data is that the FSP unit's reported gross income equal the sum of the person-level income amounts of each person in the FSP unit. Recall from Table IV.1 that this relationship is the most inconsistent of the four key relationships presented in that table. In our analysis of administrative case files we discovered that this sometimes occurs because income that is counted in the FSP unit's gross income is recorded on the person-level income of someone who is not in the FSP unit.

We discovered two principal causes why income that is counted in determining an FSP unit's eligibility and benefits would be recorded on the person-level income of someone not in the FSP unit. The first reason is that the household may contain an FSP-ineligible legal alien who is not in the household's FSP unit but whose income, nevertheless, is deemed available to the FSP unit and thus is counted in the

unit's gross income. The second reason is that the FSP unit may contain a child with income whose parent or guardian is not in the FSP unit. The most common example of this is the child-only FSP unit where the child receives AFDC income but the AFDC income is reported on the record of the parent or guardian.

Like inconsistencies caused by a prorated FSP benefit, inconsistencies caused by the reporting of FSP countable income on the record of someone who is not in the FSP unit are not an indication of poor quality data. Rather, our consistency tests are not sophisticated enough to recognize and account for FSP countable income on the record of someone not in the FSP unit.

What fraction of the inconsistencies between reported and constructed gross income are caused by the exclusion (from constructed income) of countable income reported for persons who are not in the FSP unit? Recall (from Table IV.2) that only 22 percent of the inconsistent cases had a reported gross income that was greater than the constructed amount. This suggests that at most one-fifth of the gross income inconsistencies can be attributed to this cause, leaving the remainder unexplained.

4. Difficulty Constructing Net Income

Another of the key relationships discussed earlier in this chapter that is incorporated into a consistency test is that reported net income must equal gross income minus the total deductions to which a unit is entitled. At times data appear to be inconsistent because of the difficulty of determining the total deductions to which a unit is entitled. Although the IQCS data contain reported values of gross and net income, they do not contain reported values of all the various deductions. Specifically, they do not contain the reported values of the dependent care deduction, the medical deduction, and the shelter deduction. Instead, they contain only the reported expenses from which these deductions are derived. In most units, calculating the correct deductions from the reported expenses is easy; in some units, though, it is much more difficult.

The amount of the dependent care deduction can be difficult to calculate because the IQCS data contain only one field for dependent care expenses even though a unit may contain more than one

dependent. Dependents for purposes of the FSP can be children or disabled adults, and the amount of the deduction is capped at $175 ($200 for children under age 2) for *each* dependent in the unit. Identifying dependents who are children is easy, but there is no field that identifies whether an adult is a dependent. Whether an adult is also a dependent could be surmised by whether that adult is disabled, but there is also no field that identifies whether a person is disabled. Instead, disability status must be imputed on the basis of the receipt of Supplemental Security Income, Social Security Disability Income, or other types of transfer income for which persons may qualify because of disabilities. Such imputations are not perfect. For example, the disability imputation algorithm used when creating the QC databases does not identify any elderly as disabled because all of the aforementioned income types can be received by the elderly without regard to their disability status. If some of the dependents in a unit are not identified as such, the dependent care deduction will be calculated incorrectly.

The medical deduction can be claimed only by units that contain an elderly or disabled member. Identifying an elderly person is easy because the IQCS data have an age field. But, as mentioned above, identifying persons with disabilities is more difficult. If a unit contains a disabled person who is not identified as such, the unit will not receive a medical deduction when calculating net income.

The shelter deduction can be difficult to calculate correctly because it depends on the correct calculation of all the other deductions. Recall that the shelter deduction is equal to the amount of shelter expenses above 50 percent of gross income minus all other deductions, up to a cap for units without elderly or disabled persons.

Overall, most units' circumstances are simple enough that net income is easily calculated from reported gross income and reported expenses. Nevertheless, when unit circumstances become even somewhat more complicated, the probability of calculating net income wrong is high merely because the number of calculations required to calculate net income is high.

5. Mission of the QC Reviewer

The primary mission of the QC reviewer is to determine whether a case had a payment error--that is, whether it received an FSP benefit that was too high or too low--and, if so, the amount of the payment error. Therefore, the most important fields for the QC reviewer to code correctly are those that the Quality Control Branch use to calculate the payment error rate for each state. Those fields are as follows:

- ***Disposition of review***: whether the case had a completed QC review
- ***Review findings***: whether the case had no payment error, an overpayment, an underpayment, or was totally ineligible
- ***Error amount***: the dollar amount of any reported payment error
- ***Coupon allotment***: the FSP benefit for which the unit was certified by the caseworker
- ***Other information***: the QC review number, the state and stratum, and the sample month and year of the case

Since the focus of the QC reviewer is on accurately recording the above fields, the reviewer may place less emphasis on fields that are not instrumental to this goal.

E. CONCLUSIONS ON INCONSISTENCIES: RAMIFICATIONS FOR FILE EDITING

We find that apparent inconsistencies in the IQCS data, although fairly common and troublesome for analytic purposes, do not necessarily indicate poor quality. We do not find that the inclusion of original caseworker data, errors and all, in the IQCS data is a substantial cause of inconsistencies, although it no doubt explains some of them. In many instances, consistency test failures occur not because of errors in one or more of the items referenced in the tests but because the tests themselves are not sophisticated enough to account for all of the relevant provisions of FSP regulations. Specific deficiencies that we have identified may account for up to one-fourth of the apparent inconsistencies in benefit amounts, one-fifth of the inconsistencies in gross income, and two fifths of the inconsistencies in the earned income deduction.

Even with this new understanding, creating editing algorithms that are detailed enough to differentiate truly inconsistent cases from those that merely appear to be inconsistent is not straightforward. Correcting all of the deficiencies that we have identified may require variables that are not reported in the IQCS data. These variables include person-level disability and dependent status flags, indicators of the amount and type of income that may be deemed from persons not in the FSP unit, and whether the FSP unit's benefit was prorated.

Nevertheless, our findings from the examination of administrative case files provide us with information with which to enhance the current IQCS data editing scheme. In particular, our findings suggest that where a discrepancy exists between the value reported for a key variable and its components, such as when reported gross income does not equal the sum of the person-level income of each person in the FSP unit, the value reported for the key variable is usually correct. If it is not correct, it is nevertheless the value used by the QC reviewer and thus is usually the value of interest for analysis of the FSP. For example, we find that in most cases the reported value of gross income is indeed the amount that the caseworker used for the gross income eligibility test. Likewise, we also find that reported net income is usually the amount used for the net income test and that the reported benefit is usually the FSP benefit actually received. If reported gross income minus deductions does not equal reported net income, then one of the deductions was probably calculated incorrectly in performing the test. Similarly, if the reported net income does not imply the reported benefit, then the reported benefit is probably correct and the discrepancy is the result of prorating or another restriction on the maximum FSP benefit to which the unit is entitled.

Therefore, we believe that the best editing strategy to make the IQCS data mirror as closely as possible the income amounts actually used to determine eligibility and the FSP benefit actually received is to defer to the reported value of a key variable whenever an inconsistency exists between that variable and its predecessors or components. This is not the strategy employed by the current editing scheme. In

fact, the current editing scheme, when possible, attempts to preserve the intermediate values of a variable, particularly with respect to gross and net income. For example, the editing scheme generally defers to the sum of the person-level income when discrepancies exist between that sum and reported gross income.

The current scheme was adopted because of the difficulty of determining how to edit person-level income when discrepancies exist--that is, from whom the income should be added or subtracted and the type of income that should be added or subtracted. But despite the editing scheme's flaws, it is able to reconcile correctly most inconsistent cases. One indication that the current editing scheme works well, on average, is that the mean reported values of key variables in the IQCS data are very close to their subsequent edited values (Table IV.7). The mean values of the earned income deduction and the FSP benefit do not change after editing; the mean value of gross income changes by only $2; and the mean value of net income shifts by only $10. Thus, before changing the current editing scheme, the benefits of the proposed changes need to be weighed carefully against the cost of making changes.

In the next chapter, we assess the quality of the IQCS data by measures other than data consistency.

TABLE IV.7

COMPARISON OF MEAN VALUES OF REPORTED VERSUS EDITED VARIABLES IN IQCS DATA

	Reported IQCS Value	Edited IQCS Value
Gross Income	501	499
Earned Income Deduction	28	28
Net Income	259	269
FSP Benefit	174	174

SOURCE: 1993 IQCS database.

Table of Contents

V. IQCS QUALITY: SOURCES OF ERROR

In this chapter, we assess the quality of the IQCS data in terms of sampling error, various types of nonsampling error, the reporting of asset data, and congruity with survey data.

A. SAMPLING ERROR

The IQCS data are a sample of the entire population of case files; therefore, estimates based on these data are subject to sampling error. Another sample drawn in exactly the same way might yield different estimates. A large number of samples, all drawn in the same way, would yield a distribution of estimates. Because drawing a large number of samples is impractical, statisticians use the concepts of variances and standard errors, which describe, mathematically, the distribution of a set of hypothetical sample estimates. Sampling error refers specifically to the variance or standard error of a sample estimate. All other error associated with the collection of a set of data is considered nonsampling error. Nonsampling error can contribute to the variability of an estimate as well, but more commonly nonsampling error contributes to bias.

The amount of sampling error associated with a sample estimate is affected by the sample design and by the variability of the characteristic that is being estimated. With knowledge of the sample design, the magnitude of the sampling error can be estimated with no additional information beyond what is contained in the database itself. By contrast, nonsampling error can be estimated only with reference to data from another source.

The design of the IQCS sample, nationally, reflects the multiple purposes to which the data are applied. The primary purpose for which the data are collected is to estimate the accuracy of food stamp eligibility and benefit determinations at the state level. If this were the sole purpose for which the data are collected, there would be no reason for any one state's sample to be larger or smaller than that of any other state. On the other hand, if the primary purpose for collecting the data is to develop estimates of the

characteristics of food stamp households nationwide, then the most efficient sample design would be one in which the state sample sizes varied in proportion to their caseloads--or, in other words, the same sampling rate is applied in all states.[1] The formula that states must use to determine their sample sizes, which was described in Chapter 2, illustrates the competing purposes of the data collection. State sample sizes do vary in proportion to their food stamp caseloads but only between a specified minimum and a maximum sample size. Appropriately, the samples used for federal re-reviews, which have little use outside of the estimation of state error rates in the payment of benefits, are even more tightly bounded than the state review samples.

The calculation of standard errors for estimates of the characteristics of the FSP population at the national level requires the application of procedures for complex samples because sampling rates differ by state and because states may stratify their samples differently. Standard errors calculated under the assumption that the national sample is a simple random sample of the entire caseload would tend to understate the true variability (or overstate the precision) of the estimates. Estimates of the sampling error associated with estimates of a wide variety of characteristics of food stamp households are presented in Appendix I of the annual report published by FCS entitled *Characteristics of Food Stamp Households*.[2] This same report documents the methodology used to calculate these standard errors.

B. NONSAMPLING ERROR

In this section, we discuss various types of nonsampling error that may affect the quality of the IQCS data and, subsequently, the quality of the QC database. Specifically, we ask whether sample selection, editing, and weighting procedures used in the IQCS data produce a file that is truly representative of the

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[1]One reason why even a small state might want a sample size larger than the minimum is that a larger sample provides greater precision for evaluating the sources of payment errors. At the same time, states with large caseloads could argue for correspondingly larger samples because they need greater sample size to evaluate larger numbers of caseworkers.

[2]For estimates of standard errors for the fiscal year 1993 database, see Smolkin (1995).

food stamp population in a given year and whether transcription and data entry error contribute significantly to errors in the IQCS data. We will address first the sample selection, editing, and weighting procedures.

1. Sample Selection, Editing, and Weighting Procedures

To determine whether sample selection and editing procedures introduce error in the IQCS data, Stavrianos (1996) posed and analyzed the following questions:

- Is the IQCS sample representative of the food stamp population?
- Is the QC database--the edited version of the IQCS data--a representative sample of the food stamp population?
- Do the IQCS data editing procedure introduce biases in the QC database?
- Are the computed weights in the QC database appropriate?

We review his findings in detail.

a. Is the IQCS Sample Representative of the Food Stamp Population?

The question as to the representativeness of the IQCS sample must be raised because some food stamp units are not subject to QC review. These units are counted in the program operations totals that are used to document the program size and to weight the QC database but are not part of the sample universe.[3] Systematic differences between excluded cases and cases that are subject to QC review could introduce biases.

Some households that are not subject to QC review are inadvertently included in the IQCS sample. These households make up about 5 percent of the cases in the IQCS data. By comparing these cases to

[3] A household that received food stamps in a given review period is not subject to QC review if the participants died or moved outside the state, received benefits by an FCS-authorized disaster certification, received benefits under a 60-day continuation of certification, received restored benefits in accordance with the FCS-approved state manual but were otherwise ineligible, were under investigation for FSP fraud (including those with pending fraud hearings), or were appealing a notice of adverse action and the review date fell within the time period covered by continued participation pending hearing.

cases that are subject to QC review, Stavrianos assessed the possibility that their exclusion biases the sample in measurable ways. Unfortunately, the IQCS data lack information on unit size and benefits for virtually all units that are not subject to QC review. It is not clear whether these data are missing because QC reviewers are not required to transcribe this information from the case record, or whether the data are omitted during the creation of the IQCS database. In any event, without these data it is not possible to assess the impact of sample exclusions at the household level.

What can be done, though, is to compare the accuracy of IQCS data estimates across states. If cases that are not subject to review are in fact different from those that *are* subject to review, the IQCS data estimates should deviate less from program operations data when a greater percentage of the state caseload is subject to QC review. Conversely, as the percentage of a state's caseload that is not subject to review increases, IQCS data estimates should deviate more from program operations totals.[4]

To test this hypothesis, Stavrianos ran a series of ordinary least squares regressions in which the percent of a state's IQCS sample that is not subject to review was used to predict the inaccuracy of IQCS data estimates in the state. Three different measures of IQCS data inaccuracy were employed: (1) the difference between IQCS sample estimates and program operations counts of FSP participants; (2) the difference in estimates of the total dollar amount of benefits issued; and (3) the difference in per-capita food stamp benefit--a unidimensional measure that combines the participant and benefit measures.[5]

As shown in Table V.1 (Analysis 1), the percentage of a state's caseload that is not subject to review is significantly and positively correlated with overestimation of the number of participants. The coefficient

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[4]While there is no direct measure of the proportion of a state's caseload that is not subject to review, this proportion can be estimated on the basis of the IQCS sample (i.e., the percentage of cases in the IQCS sample that are not subject to review). These data are published in the Food Stamp Quality Control Annual Report.

[5]The data set used for these regressions consisted of three records for each state and the District of Columbia--one for each fiscal year between 1992 and 1994--and two records for Guam and the Virgin Islands, as these states were excluded from the fiscal year 1992 QC database.

TABLE V.1

RELATIONSHIP BETWEEN IQCS ACCURACY AND
PERCENT OF STATE CASELOAD NOT IN IQCS SAMPLE
(Fiscal Years 1992-1994)

	ANALYSIS 1			ANALYSIS 2		
	Participant Inaccuracy	Benefit Inaccuracy	Per-Capita Benefit Inaccuracy	Participant Inaccuracy	Benefit Inaccuracy	Per-Capita Benefit Inaccuracy
Pct. of Cases Not Subject to Review	0.208*	0.022	-0.149*	0.156*	0.007	-0.121*
Pct. of Reviews Not Completed				0.433**	0.125	-0.230*
Constant	-0.023	-1.112	-0.561	-1.425	-1.516	0.182
R Squared	0.049	0.000	0.048	0.144	0.005	0.100
Observations	157	157	157	157	157	157
Degrees of Freedom	155	155	155	154	154	154

* Statistically significant at the 0.01 level
** Statistically significant at the 0.001 level

SOURCE: Fiscal Year 1992-1994 IQCS databases.

of 0.208 indicates that an increase of 5 percentage points in cases not subject to review will cause the IQCS data estimate of participants to increase by roughly 1 percent relative to the program operations count. This suggests that units that are subject to QC review tend to contain more people than do units that are not subject to review.

If QC review units are, on average, larger than non-review units, they may tend to receive more in benefits. By extension, when the number of participants in a state is overestimated (that is, when a state contains a higher percentage of non-review cases), the total benefits paid in the state should be overestimated as well. However, as shown in Table V.1, the percentage of cases not subject to review is not associated with benefit inaccuracy. The net effect of overestimating participation with no corresponding impact on benefits is that the IQCS data tend to underestimate per-capita benefits in states that have a high percentage of non-review cases. This suggests that the units that are not subject to QC review are, on average, smaller than QC review units and receive larger per-capita benefits. The differences are small, however, and for this reason Stavrianos assigned low priority to the development of a correction to the weights.

b. Is the QC Database a Representative Sample of the Food Stamp Population?

During editing of the IQCS data, about 10 percent of the unweighted cases are excluded from the IQCS data. About half of these cases are excluded because they are not subject to QC review, as described above. The remaining cases are excluded because, for a variety of reasons, their QC reviews were not completed.[6] If the latter cases are systematically different from the retained cases, biases could be introduced.

[6] Reasons for an incomplete review, as reported in the IQCS data, include the following: the recipient was unwilling to give information, the reviewer was unable to locate the recipient, the case was not processed, the case was deselected due to oversampling. Some cases were incomplete for unspecified reasons (coded as "other" in the IQCS data).

Stavrianos hoped to assess the possibility of bias by comparing QC database estimates to estimates based on the QC database plus the 4 percent of cases without completed reviews that are excluded from the QC database. Once again, however, unit size and benefit data were missing from the IQCS data for virtually all (97 percent) of the cases with incomplete QC reviews. Without these data, it was not possible to measure the nonresponse bias directly.

As was done in Analysis 1, however, the percentage of incomplete reviews in a state could be used to predict the accuracy of QC database estimates across states. If incomplete review cases are systematically different from those with complete reviews, the QC database estimates should be more accurate when reviews are completed for a greater percentage of the state sample. To test this hypothesis, Stavrianos used the percent of incomplete reviews in a state as a second explanatory variable--along with percent of cases not subject to review--to predict the inaccuracy of QC database estimates in the state.

As shown in Table V.1 (Analysis 2), the percentage of incomplete reviews in a state's QC database sample is positively correlated with the overestimation of participants. Moreover, the impact of incomplete reviews on participant overestimation is greater in magnitude than the impact of cases not subject to review. The coefficient of 0.433 indicates that, after controlling for the percentage of cases not subject to review, an increase of 5 percentage points in incomplete reviews will cause the IQCS data estimate of participants to increase by 2.17 percent relative to the program operations count. This suggests that units with completed QC reviews tend to contain more people than do incomplete review units.

Once again, however, the correlation between completed reviews and the overestimation of participants does not translate into an overestimation of total benefits paid in the state. As shown in Table V.1, the percentage of incomplete reviews in a state has no impact on benefit inaccuracy, and is associated with underestimation of a state's per-capita benefit level. Hence, Stavrianos inferred that, on average, the units that reviews are not complete are smaller than QC review units and receive larger per-capita benefits.

As with the units that were not subject to review, however, Stavrianos did not assign high priority to an attempt to compensate for this difference by adjusting the unit weights.

c. Do the IQCS Data Editing Procedures Introduce Biases?

As described in Chapter IV, the IQCS data are edited for consistency before being used for analyses of the Food Stamp Program. These edits may bias estimates of such characteristics as unit size, unit income, and unit benefits.

To test whether reported and computed measures of unit size differ, Stavrianos compared their distributions. Based on the 1993 QC database, computed and reported unit size match in 99.9 percent of all cases (Table V.2). Moreover, in the few cases in which the variables are not equal, computed household size is not consistently larger than reported household size. Comparisons based on the 1991 and 1992 QC databases (not reported) yield similar results.

Stavrianos repeated this comparison for reported and computed measures of benefits. The weighted mean values of reported and computed benefits in the 1993 QC database are nearly identical--$169.97 compared to $170.15. Comparisons based on the 1991 and 1992 databases produced similar results.

Finally, Stavrianos used reported measures of household size and FSP benefit to tabulate total FSP participants and benefits and compared these figures to totals based on computed variables. As shown in Table V.3, participant totals based on reported variables are within 0.1 percent of the totals based on computed variables. Similarly, computed and reported benefit totals are within 0.5 percent of one another.

d. Are the Computed Weights in the QC Database Appropriate?

The QC database is weighted to match program operations figures on the number of units participating in the FSP. A separate weight is computed for each state and stratum, in each month. For states that do not stratify their samples, the weight is calculated by dividing the total number of FSP households in the state in a given month (from program operations data) by the number of completed

TABLE V.2

COMPARISON OF COMPUTED AND REPORTED UNIT SIZE
(Fiscal Year 1993)

Relationship Between Computed and Reported Unit Size	Weighted Households		Unweighted Households	
	Number	Percentage	Number	Percentage
All Values (Total)	10,791,076	100.00%	56,822	100.00%
Reported > Computed	6,887	0.06%	35	0.06%
Reported = Computed	10,776,695	99.87%	56,742	99.86%
Reported < Computed	7,493	0.07%	45	0.08%

SOURCE: Fiscal Year 1993 IQCS database.

TABLE V.3

FSP PARTICIPANTS AND BENEFITS: REPORTED VS. COMPUTED MEASURES

Fiscal Year	Reported Participants	Computed Participants	Percentage Difference	Reported Benefits	Computed Benefits	Percentage Difference

reviews in that state and month. For states and months with stratified samples, the total number of FSP households in a state and month is multiplied by the estimated percentage of FSP households within each stratum.[7] These stratum-specific population estimates are divided by the numbers of edited IQCS sample cases in each stratum to obtain stratum-specific weights for a state and month.

For months with stratified samples, the stratum-specific population estimates derived in the above manner are based, in part, on sample data. More specifically, the allocation of the total food stamp households in a given month to the sample strata is based on the product of the sampling interval and the resulting sample size in each stratum. These sample sizes are subject to sampling error. Because of this the stratum-specific population sizes are estimates rather than exact counts. Using them to calculate weights does not convey the full benefits of post-stratification. Any error introduced as a result, though, is sampling error, not bias. Furthermore, depending on how the samples are drawn, the sampling error may be very small.

Since program operations data do not indicate the true number of households in each QC sampling stratum, it is not possible to compare IQCS data and program operations counts in individual strata. What is possible, though, is to examine whether participant and benefit discrepancies are greater in states with stratified samples. As shown in Table V.4, this is not the case. When the states are ranked according to per-capita benefit inaccuracy, stratified states are evenly distributed throughout the list. An analysis of variance confirms that there is no correlation between sample stratification and per-capita benefit inaccuracy.

e. Conclusions

Stavrianos identified three potential sources of error in the sample selection, editing, and weighting procedures used in the IQCS data: (1) the exclusion of certain FSP units that are included in the program

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[7] These estimates are based on the state's sampling interval and the number of cases selected for review. For a description of the methodology used to create stratum weights see Lewis et al. (1995).

Table of Contents

TABLE V.4

DISTRIBUTION BY STATES OF PER-CAPITA BENEFIT DIFFERENCE
BETWEEN IQCS AND PROGRAMS OPERATION DATA
(Fiscal Years 1992-1994)

State	Yr.	Per Cap. Differ.	Strat.	State	Yr.	Per Cap. Differ.	Strat.	State	Yr.	Per Cap. Differ.	Strat.
Alaska	92	-10.81	1	Maine	93	-2.02		New Hampshire	92	-0.89	1
Dist. of Col.	94	-8.67		Alaska	93	-1.96		Michigan	92	-0.88	1
New York	94	-7.06		New Jersey	92	-1.92		Texas	93	-0.86	1
New Hampshire	94	-6.92		Colorado	93	-1.89	1	Oregon	92	-0.81	1
Florida	92	-6.88		New Mexico	94	-1.87	2	Virgin Islands	94	-0.78	
Nevada	92	-6.83		Louisiana	94	-1.86	2	Massachusetts	93	-0.73	1
Dist. of Col.	93	-6.80		Georgia	92	-1.82		North Carolina	92	-0.73	
Ohio	94	-5.61		California	93	-1.80		Colorado	92	-0.73	1
Nevada	93	-4.90		Kentucky	92	-1.80		South Dakota	92	-0.63	1
Maine	92	-4.84		Missouri	94	-1.70		Iowa	94	-0.60	
Florida	93	-4.78		Missouri	93	-1.68		Wisconsin	94	-0.57	1
Guam	93	-4.31		Utah	94	-1.64		Missouri	92	-0.53	1
Florida	94	-4.26		North Dakota	93	-1.64		Texas	94	-0.52	1
California	94	-3.94		Oklahoma	93	-1.64		South Dakota	93	-0.51	
Illinois	94	-3.91	1	Nebraska	94	-1.61		Nevada	94	-0.34	
Oregon	94	-3.80	1	Alaska	94	-1.57		Maryland	93	-0.24	
New York	93	-3.77		Rhode Island	92	-1.57	1	Louisiana	93	-0.19	
California	92	-3.70	1	North Carolina	93	-1.56		Maryland	94	-0.14	
West Virginia	94	-3.70	1	Connecticut	92	-1.55	1	Tennessee	93	0.00	
Oklahoma	94	-3.67		Ohio	92	-1.51		Vermont	94	0.06	
Arkansas	92	-3.67		Alabama	94	-1.50		Nebraska	92	0.07	
Ohio	93	-3.53	2	South Carolina	92	-1.50		Michigan	93	0.19	2
Wyoming	94	-3.41		Alabama	92	-1.46		New Jersey	94	0.29	
Georgia	94	-3.28		West Virginia	92	-1.44		Pennsylvania	92	0.35	
Minnesota	93	-3.24		Alabama	93	-1.41		Washington	92	0.38	1
Virginia	92	-3.23		Utah	92	-1.39	1	Arizona	93	0.40	
North Dakota	94	-3.14		North Carolina	94	-1.38		Michigan	94	0.41	
New York	92	-3.00		Maine	94	-1.34		Montana	93	0.44	
Minnesota	92	-2.94	1	New Hampshire	93	-1.31		New Jersey	93	0.48	2
Maryland	92	-2.88		Indiana	94	-1.29		Tennessee	94	0.57	
Minnesota	94	-2.82		Colorado	94	-1.28	1	Wyoming	93	0.57	
New Mexico	92	-2.79		Wyoming	92	-1.27	1	North Dakota	92	0.61	1
New Mexico	93	-2.72		Virginia	94	-1.26		Arizona	94	0.76	
Texas	92	-2.68		Vermont	92	-1.25	1	Washington	93	0.89	2
Wisconsin	92	-2.68	1	Oklahoma	92	-1.25		Guam	94	0.93	2
Montana	94	-2.63		Oregon	93	-1.23	1	Pennsylvania	93	0.98	
Kentucky	94	-2.61		Georgia	93	-1.23		Arizona	92	1.04	
Virginia	93	-2.61		Arkansas	94	-1.22		Idaho	93	1.05	
Nebraska	93	-2.60		Rhode Island	93	-1.20		Vermont	93	1.16	
Indiana	93	-2.55	2	Arkansas	93	-1.17	2	South Dakota	94	1.27	
Illinois	92	-2.55	1	Massachusetts	94	-1.16	1	Tennessee	92	1.38	
Illinois	93	-2.52	1	Montana	92	-1.16	1	Idaho	94	1.51	
South Carolina	93	-2.51	2	Louisiana	92	-1.10	1	Idaho	92	1.64	1
Indiana	92	-2.50	1	South Carolina	94	-1.10	2	Kansas	94	1.72	
Connecticut	93	-2.48		Mississippi	94	-1.06		Hawaii	92	1.93	
Washington	94	-2.41	2	Kentucky	93	-1.06		Delaware	92	1.96	1
Iowa	92	-2.38	1	Iowa	93	-1.04		Hawaii	93	2.35	
Dist. of Col.	92	-2.34		Utah	93	-1.00	1	Kansas	92	2.62	1
Massachusetts	92	-2.29	1	Mississippi	93	-0.98		Hawaii	94	3.42	
Connecticut	94	-2.20		Virgin Islands	93	-0.96		Kansas	93	4.22	
Rhode Island	94	-2.12		Mississippi	92	-0.92		Delaware	93	5.45	
Wisconsin	93	-2.06	1	Pennsylvania	94	-0.92		Delaware	94	7.73	
								West Virginia	93	9.26	1

SOURCE: IQCS and program operations data: fiscal years 1992, 1993, and 1994

NOTE: A value of 1 in the stratified column indicates a state whose IQCS sample was stratified by program. A value of 2 indicates stratification by time in order to adjust sample size.

operations universe; (2) edits made to the data; and (3) inappropriate weighting in states that employ stratified sampling.

Data limitations prevented a direct determination as to whether FSP units that are not represented in the QC database are systematically different from units that *are* represented in the IQCS data. Instead, Stavrianos examined whether QC database estimates are less accurate in states with higher percentages of incomplete reviews or cases not subject to QC review. As the coverage of the QC database decreases, the IQCS data tend to overestimate participation and underestimate per-capita benefits (though not absolute benefits). Hence, while the characteristics of units that are not represented in the IQCS data cannot be observed directly, it can be inferred that they are, on average, smaller than QC review units and receive larger per-capita benefits.

Based on this analysis, we do not believe that the editing procedures introduce error. Computed measures of unit size and benefit level match reported figures for over 99 percent of food stamp units. Moreover, the few differences that do exist are not systematic in nature.

While IQCS data weights in states that employ stratified sampling are based on potentially inaccurate estimates of stratum population, this does not appear to bias estimates of participants and benefits in those states. Specifically, per-capita benefit inaccuracy in states with stratified QC samples is no greater than in states with non-stratified QC samples.

2. Transcription and Data Entry Error

Transcription error is the inadvertent, incorrect copying of data from the caseworker file to the worksheet, or from the worksheet to the Integrated Review Schedule (the coding form that is used for creation of the IQCS database) by the state QC reviewer. Data entry error is the inadvertent, incorrect entry of the wrong data from the Integrated Review Schedule to the IQCS database. We can estimate the frequency of data entry error by comparing the abstracted caseworker data in our sample of QC review case files with that of the IQCS data for those same cases. We cannot similarly estimate the frequency of

transcription error because the Integrated Review Schedule is the source of the caseworker data in our sample of QC review case files. To measure transcription error at its fullest, we would have had to abstract the caseworker data from the caseworker's actual records--a process that would have been extremely time consuming and prone to error. Alternatively, we could have abstracted the caseworker data from the worksheet, which would have enabled us to measure at least part of the transcription error. But collecting even these data would likely have produced more errors than copying items from the IRS.

We estimate the frequency of data entry error by comparing the abstracted caseworker data in our sample of QC review case files to that of the IQCS data for those same cases. This methodology of comparing abstracted caseworker data with IQCS data has a significant limitation, however: it does not distinguish data entry error in the IQCS data from data entry error in our sample of QC review case files. Therefore, any errors that we observe will represent an upper bound estimate of the amount of error in the IQCS data due to data entry error. We are able to address this problem indirectly, however, as we explain below.

The top panel of Table V.5 shows the percentage of administrative case files that we sampled where the abstracted caseworker data does not agree with the IQCS data for key variables. Both unweighted and weighted percentages are reported. Because cases with inconsistencies and payment errors were oversampled in the abstracted data, weighting is necessary to reflect accurately the caseloads represented by the samples. Indeed, in this table, the unweighted percentages tend to overstate the differences between the IQCS data and the abstracted data. Except for shelter costs, which shows deviations, inexplicably, that are far above the other items, the weighted percentages of cases in disagreement range from 0 to 3 percent for the variables presented.

Mere disagreement, of course, may be due to an error in the abstracted data rather than the IQCS data. Arguably, however, IQCS values that disagree with the abstracted data *and* exhibit an internal inconsistency are very likely to have been punched or even transcribed incorrectly by the QC reviewer.

TABLE V.5

ANALYSIS OF DATA ENTRY ERROR IN IQCS DATA
(Entries are cases where IQCS reported data do not equal caseworker data from sample of cases abstracted for this report)

	Total		Mid-Atlantic		Southeast		Midwest		Western	
	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.
Gross Income	13	2.3	0	0.0	0	0.0	6	4.1	1	0.7
Net Income	22	3.9	3	2.4	5	3.4	4	2.7	10	6.6
FSP Benefit	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Unit Size	5	0.9	0	0.0	1	0.7	0	0.0	4	2.6
Dependent Care Costs	7	1.2	0	0.0	4	2.7	3	2.1	0	0.0
Medical Costs	6	1.1	1	0.8	3	2.0	2	1.4	0	0.0
Earned Income Deducti	7	1.2	2	1.6	0	0.0	2	1.4	3	2.0
Shelter Costs	102	18.0	16	13.0	13	8.8	48	32.9	25	16.6
Total Cases	568	100.0	123	100.0	148	100.0	146	100.0	151	100.0

Analysis of cases with possible data entry error*

	IQCS Data Reported Value	IQCS Data Constr. Value	Abstracted Data Reported Value	Abstracted Data Constr. Value
Gross Income				
1	779	597	389	189
2	692	674	696	674
3	515	430	503	515
4	1,330	1,600	1,600	1,600
5	1,109	1,160	1,160	1,160
6	1,209	10,231	1,509	10,231
7	460	546	546	546
8	460	546	546	881
Earned Income Deduction				
1	200	0	0	0
2	12	129	129	129
3	0	70	70	70
4	0	51	151	51
5	0	22	22	22
Net Income				
1	55	88	0	34
2	98	78	78	48
3	355	403	365	202
4	469	460	460	276
5	0	307	189	114
6	15	0	0	0
7	327	230	229	138
8	522	607	408	246
9	188	346	346	208
10	0	105	105	64
11	105	183	215	64
12	63	327	264	160
13	77	184	63	48
14	944	744	535	322
15	335	303	302	182

SOURCE: 1993 IQCS database and data abstracted from a sample of administrative case files drawn from the 1993 IQCS databas

* These cases are the subset of cases where IQCS reported data do not equal caseworker data from the sample of cases abstracted for this report. The subset is defined as those cases where the IQCS reported and constructed values are not equal.

The bottom panel of Table V.5 shows a subset of the cases reported in the top panel for gross income, earned income deduction, and net income. For this subset of cases, the IQCS values disagree with the abstracted caseworker values *and* the reported IQCS values do not equal the constructed values--that is, the IQCS values are internally inconsistent.[8] The reported and constructed values for both the IQCS data and the abstracted data are presented in the table.

Limiting the cases to those for which the IQCS values are internally consistent reduces the number that we would view as probable data entry errors. The number of cases with possible data entry errors for gross income drops from 13 to 8; the number with possible errors for the earned income deduction drops from 7 to 5; and the number with possible errors in net income falls from 22 to 15. In other words, for each item the possible error rate drops by about a third.

Reviewing the data values reported in the lower panel of Table V.5 suggests that even some of the remaining cases may not represent actual data entry errors. The clearest evidence of a data entry error in the reported IQCS value is when the reported value from the abstracted data agrees with the constructed values from both the IQCS and the abstracted data. This pattern describes all five of the cases listed for the earned income deduction but only three of the gross income cases and only one of the net income cases. To resolve the remaining cases would require re-examination of the original review schedules, worksheets, and computation sheets. Errors in the abstracted data for the reported items and the components of the constructed items may account for some of the discrepant IQCS and abstracted data values. In conclusion, then, the overall percentage of cases with discrepancies between the IQCS data and the abstracted caseworker data, as shown in the top panel of Table V.5, tends to overestimate the percentage of IQCS

[8]We exclude cases where the IQCS data reported and constructed values are equal under the assumption that data entry error in the reported value is not likely if it is consistent with the constructed value. The difference between the IQCS reported value and the abstracted value in this instance is probably due to improperly abstracted data from the administrative case file.

records with data entry errors. True data entry error, therefore, most likely does not contribute substantially to error in the IQCS data.

C. ASSETS: CASEWORKER DATA VERSUS FEDERAL DATA

One of the objectives of this study is to determine the quality of the reported assets in the IQCS data. A frequently voiced concern is that the asset data are unreliable--specifically, that assets are underreported because of the nature of the FSP asset test. A quick review of the FSP asset test will elucidate the basis for this concern.

To be eligible for the FSP, a unit must not have countable assets that exceed the following levels:

- Units without an elderly member cannot have countable assets above $2000
- Units with an elderly member cannot have countable assets above $3000

Except for eligibility determination, the level of a unit's assets has no bearing on either income eligibility or the amount of the FSP benefit to which the unit is entitled. Therefore, once a QC reviewer determines that a unit is clearly under the asset limit, there is little incentive to report asset levels accurately, if at all.

The federal data in the administrative case files sampled for this study show slightly fewer units *without* assets than do the caseworker data: 71 percent versus 74 percent of the estimated population of food stamp units in the four regions (top panel of Table V.6). Furthermore, the federal reviewer also tends to capture more assets than the caseworker for units *with* assets. The median value of assets for units with assets according to federal data is nearly double that according to caseworker data: $333 versus $179, respectively. Moreover, the federal reviewers find assets in excess of $2,000 for cases representing 88,000 units (1.2 percent of the total caseload), whereas the caseworkers find assets this high for cases representing fewer than 1,000 units (less than 0.1 percent of the total caseload).

As described above and shown in the distributional statistics in the top panel of Table V.6, the federal reviewers find more assets on average than the caseworkers. How often, though, do the federal reviewers

TABLE V.6

ESTIMATES OF ASSET HOLDINGS OF FOOD STAMP UNITS: CASEWORKER DATA VERSUS FEDERAL REVIEWER DATA

		Number (000s)	Percent of Subtotal	Percent of Total
Caseworker and Federal Reviewer Findings				
Caseworker Findings				
0		5,287.0	-	74.0
1-100		757.1	-	10.6
101-250		260.5	-	3.6
251-500		307.6	-	4.3
501-1000		255.4	-	3.6
1001-2000		275.9	-	3.9
2001-3000		0.0	-	0.0
3000+		0.6	-	0.0
Total		7,144.2	-	100.0
Mean (for cases with nonzero assets) =	425			
Median (for cases with nonzero assets) =	179			
Federal Findings				
0		5,084.8	-	71.2
1-100		543.3	-	7.6
101-250		358.6	-	5.0
251-500		486.5	-	6.8
501-1000		311.1	-	4.4
1001-2000		271.9	-	3.8
2001-3000		23.2	-	0.3
3000+		64.6	-	0.9
Total		7,144.2	-	100.0
Mean (for cases with nonzero assets) =	624			
Median (for cases with nonzero assets) =	333			
Comparison of Findings for Units with Zero Assets				
Caseworker = 0 and Federal = 0		4,555.3	-	63.8
Caseworker = 0 and Federal > 0		731.6	-	10.2
Caseworker > 0 and Federal = 0		529.5	-	7.4
Subtotal		5,816.5	-	81.4
Difference in Between Caseworker and Federal Findings				
Federal = Caseworker				
Assets = 0		4,555.3	96.1	63.8
Assets > 0		186.8	3.9	2.6
Subtotal		4,742.2	100.0	66.4
Federal <> Caseworker				
Federal > Caseworker		1,372.5	57.1	19.2
Federal < Caseworker		1,029.5	42.9	14.4
Subtotal		2,402.0	100.0	33.6
Absolute Difference in Dollars				
1-100		775.0	32.3	10.8
101-250		417.7	17.4	5.8
251-500		518.8	21.6	7.3
501-1000		420.6	17.5	5.9
1001+		269.8	11.2	3.8
Subtotal		2,402.0	100.0	33.6
Total		7,144.2		100.0

SOURCE: Data abstracted from a sample of administrative case files drawn from the 1993 IQCS database.

and caseworkers find markedly different asset amounts for the same units? The middle and lower panels of Table V.6 address this question.

Although the federal and caseworker data show only a 3 percentage point difference in the percentage of the total caseload without assets (74 percent versus 71 percent; top panel of Table V.6), the distribution in the middle panel of Table V.6 shows that this 3 percentage point difference is actually the net result of substantially more frequent differences. Presented in the middle panel of Table V.6 is the distribution of FSP units without assets according to either federal or caseworker data by whether only the federal data show no assets, only the caseworker data show no assets, or both data show no assets. Overall, 81 percent of the total caseload have no assets according to either the federal or caseworker data.[9] This 81 percent comprises 64 percent of the total caseload where the federal and caseworker data agree that there are no assets and 17 percent of the total caseload where the federal and caseworker data disagree that there are no assets. The 17 percent of the total caseload where the federal and caseworker data disagree that there are no assets, in turn, comprises 7 percent of the total caseload where the federal data show no assets and 10 percent of the total caseload where the caseworker data show no assets.

When the federal and caseworker data agree that there are assets, which they do for 19 percent of the caseload, they usually *disagree* on the amount of those assets. In fact, federal and caseworker data *agree* on the amount of nonzero assets for less than 3 percent of the total caseload (Table V.6; bottom panel). Thus, they disagree for 16 percent of the total caseload.

The bottom panel of Table V.6 shows the magnitude of the dollar differences for *all* the cases where the caseworker and federal data disagree on the amount of countable assets--that is, those cases where they agree there are assets but disagree on the amount as well as those cases where they disagree whether there are any assets at all. These cases represent 34 percent of the total caseload in the four regions. The federal

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[9]This means that 19 percent of the total caseload have assets according to *both* the federal and caseworker data. Note, though, that the federal and caseworker data may still disagree as to the amount of those assets.

reviewer is only somewhat more likely to find greater assets than to find fewer assets than the caseworker: 19 percent versus 14 percent. For nearly one-third of the cases with disagreement on asset amounts, the difference is $100 or less. For the remaining two-thirds, representing 23 percent of the total caseload, the caseworker and the federal reviewer disagree by more than $100 on the countable assets. Differences in excess of $1,000 account for 4 percent of the total caseload, while differences of more than $500 account for 10 percent of the caseload.

Overall, we find that although there are frequent differences between the caseworker and federal data on assets, which support the perception that the IQCS asset data are decidedly lower in quality than the IQCS income data, these differences do not suggest that there is substantial net underreporting of asset data by caseworkers. Rather, the federal reviewer data show fewer assets than caseworker data almost as often as they show more assets than caseworker data, with the net result that their differences largely cancel. On balance, the caseworkers and federal reviewers agree that FSP units have very low assets: nearly 3 out of 4 units have no countable assets; and the median value of assets for units with assets lies between $179 and $333, which is well below the prescribed asset limits of $2,000 and $3,000.

D. CONGRUITY WITH SURVEY DATA

One method of evaluating the quality of a database is to compare estimates prepared from this database with those developed from another source. Often something about the quality of the first database can be learned from this exercise even when the alternative source is not uniformly better. It is quite common to use administrative data to evaluate the estimates developed from sample survey data. For example, food stamp administrative data have been used to evaluate the SIPP estimates of households receiving food stamps (see Jabine et al. 1990). At the same time, sample survey data have been used to evaluate administrative data--including data from the IQCS. The aggregate characteristics of FSP participants as reported in sample survey data often differ from the characteristics of FSP participants measured in the IQCS data. In this section, we examine comparisons between data from the IQCS and

two surveys: the Survey of Income and Program Participation (SIPP) and the Current Population Survey (CPS). For the latter we consider a specific, joint application of IQCS and CPS data: the calibration of the MATH® CPS model.

1. Comparison of IQCS and SIPP Data

Carlson and Dalrymple (1986) compared the distribution of FSP units by selected characteristics as reported in the IQCS data with that reported in the SIPP. As shown in the first two columns of Table V.7, they found wide discrepancies in the proportion of the FSP population that receive earnings, Aid to Families with Dependent Children (AFDC) income, and public assistance income in general. Compared with the IQCS data, SIPP yielded markedly higher percentages of food stamp households with earnings and substantially lower percentages of food stamp households with AFDC and any public assistance. It is well known that sample surveys understate participation in the FSP, AFDC, and public assistance in general, so the differences between SIPP and the IQCS with respect to participation in these programs is not surprising and reflects favorably on the IQCS data. The discrepancies in the reported receipt of earnings may be caused by one or more of the following problems: underreporting of income in the IQCS data, overreporting of income in the SIPP survey data, errors in both, or other factors that make the two data sources not comparable (for example, differential coverage of the FSP population or differences in who gets counted as a household or unit member[10]).

Our sample of QC review case files allows us to determine to what extent error in the IQCS data may account for the discrepancies that Carlson and Dalrymple observed. We compare the proportion of the FSP population that has various types of income according to caseworker data versus federal reviewer data. These findings are presented in the last two columns of Table V.7.

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[10]Carlson and Dalrymple used a broad definition of the FSP unit in their analyses, which may result in the inclusion of some non-FSP household members in the FSP unit.

TABLE V.7

PERCENTAGE OF FSP UNITS WITH VARIOUS TYPES OF INCOME ACCORDING TO IQCS AND SIPP DATA
(Entries are the percentage of total FSP units with each income type.)

			Abstracted Data	
Income Type	8/83 IQCS	9/83 SIPP	Caseworker	Federal Reviewer
Earnings	19	34	18	21
AFDC	46	35	47	47
SSI	17	19	22	21
Public Assistance	55	46	68	69

SOURCE: Carlson and Dalrymple (1986); 1993 IQCS database; and data abstracted from a sample of administrative case files drawn from the 1993 IQCS database.

NOTES: Public assistance includes AFDC, General Assistance, and SSI.

We find no evidence that errors in the IQCS data explain the discrepancies that Carlson and Dalrymple observe. The caseworker and federal reviewer estimates of the proportion of FSP units with various income types are very similar for all items except earnings: 21 percent of FSP units have earned income according to federal reviewer data versus 18 percent according to caseworker data. The evidence of a very modest underreporting of earnings in the IQCS data does not nearly explain the 15 percentage point discrepancy between the percentage of FSP units with earned income according to 1983 SIPP data (34 percent) and that of 1983 IQCS data (19 percent). It is far more likely that the discrepancies that Carlson and Dalrymple observe are due to problems in the SIPP data.[11]

More recent analyses of SIPP and IQCS data show similar discrepancies in the percentage of FSP units with earned income. Stavrianos (1995), using 1992 SIPP and IQCS data, found that 25 percent of FSP units have earned income according to SIPP data versus 20 percent for IQCS data. That Stavrianos found a smaller percentage of FSP units with earned income in SIPP than did Carlson and Dalrymple is explained, in part, by Stavrianos' use of a more restrictive definition of the FSP unit.

To assess further the quality of the IQCS data, we compare the mean value of the amounts captured by caseworkers and federal reviewers for various types of income over units with each of the various types of income (Table V.8). We also compare the caseworker and federal reviewer data with respect to other characteristics of interest. As with the proportion of units with various income types, mean earnings is one of the few characteristics with substantial discrepancies: the mean value of earnings for units with earnings is $737 according to caseworker data versus $669 according to federal reviewer data. This difference is *not* attributable to a lower mean value of earnings for persons whom the federal reviewers but not the caseworkers identify as earners. If we exclude these cases from the federal data, the mean value of earnings reported by federal reviewers changes only slightly, falling to $665. In conclusion, even though

[11]See chapter 10 of Jabine et al. (1990) for a discussion of the quality of FSP data in the SIPP.

TABLE V.8

MEAN VALUE OF VARIOUS CHARACTERISTICS OF FSP UNITS ACCORDING TO CASEWORKER AND FEDERAL REVIEWER DATA
(Entries are mean value in dollars of characteristic over units with that characteristic.)

	Abstracted Data	
Characteristic	Caseworker	Federal Reviewer
FSP Benefit	177	169
Gross Income	495	538
Net Income	261	292
Earnings	737	669
AFDC	385	380
SSI	311	302
Public Assistance	383	378
Dependent Care Expenses	104	108
Medical Expenses	67	75
Earned Income Deduction	138	130
Shelter Expenses	328	329

SOURCE: Data abstracted from a sample of administrative case files drawn from the 1993 IQCS database.

NOTES: Public assistance includes AFDC, General Assistance, and SSI.

Table of Contents

The validity of microsimulation estimates of the impact of reforms to the FSP relies in part on the selection of a baseline FSP population that resembles the true FSP population along a number of key dimensions. The baseline can be selected in a number of ways. Since both the SIPP and CPS databases identify households that receive food stamps, the simplest method of selecting a baseline would be to include all those who report receipt of food stamps. The problem with this method is twofold. First, both the SIPP and the CPS underestimate the number of households receiving food stamps, and much of this can be attributed to sample households that fail to report their receipt of food stamps. Second, the characteristics of households that *do* report receipt of food stamps in these databases do not tend to match IQCS data and other administrative FSP data very well. Recall from earlier in this report that the characteristics of households who report receipt of food stamps according to the SIPP data and the IQCS data differ substantially along some key dimensions. In addition, some households that report receipt of food stamps have income and resources that suggest they are ineligible for food stamps, which is highly problematic for microsimulation modeling. Because of these problems, it is unwise to measure the impact of reforms to the FSP in comparison with a baseline consisting solely of households that report receipt of food stamps.

Another method of selecting households for the baseline FSP population in the MATH® model would be to include all households that the model deems to be *eligible* for the FSP. The problem with this method, though, is that not all persons eligible for the FSP actually participate. Therefore, a variation of this method is used whereby only a portion of those households eligible for the FSP are included in the baseline FSP population. When possible, the model includes households that report receipt of food stamps. Households that report receipt of food stamps alone, though, do no result in a baseline that looks very much like the food stamp population according to IQCS data in terms of either size or key characteristics. Therefore, the final selection of households for the baseline is "calibrated" so that the resulting baseline

looks like the food stamp population according to the IQCS data in terms of both size and key characteristics. Specifically, the MATH® CPS model baseline is calibrated as follows:

- FSP-eligible households with AFDC income are selected to participate on the basis of the percentage of FSP households with AFDC income in the IQCS data. Typically, all eligible households with AFDC are selected to participate because there are usually fewer eligible households with AFDC in the CPS data than there are FSP households with AFDC in the IQCS data.

- The FSP-eligible households without AFDC are selected to participate so that the characteristics of FSP households without AFDC in the baseline matches as closely as possible that of the IQCS data along four key dimensions: (1) gross income as a percentage of poverty; (2) household size; (3) presence of an elderly head of household; and (4) receipt of Supplemental Security Income (SSI) or General Assistance (GA) income. These dimensions specify a 64-cell matrix.

The 64 cell matrix of FSP-eligible households based on the CPS data is compared with the same 64 cell matrix of FSP participants derived from the IQCS data. A participation rate for each cell of the CPS matrix is then calculated on the basis of the ratio of the number of IQCS participants in each cell to the number of CPS eligibles in each cell. Selecting baseline participants in the CPS data on the basis of this participation rate *should* yield a baseline whose characteristics mirror that of the IQCS data along all the dimensions of the matrix. Nevertheless, it does not.

The problem with the participation rate determined by the comparison of the CPS data and IQCS data matrices is that the number of participants in many of the cells of the IQCS data matrix exceeds the number of eligibles according to the CPS data matrix, resulting in an analytically meaningless participation rate of over 100 percent. Therefore, in order for the number of food stamp participants in the MATH® CPS baseline to be roughly the same as that in the IQCS data, the MATH® CPS baseline must *over-select* participants in cells where the number of eligibles in the CPS data matrix exceeds the number of participants in the IQCS data matrix. Over-selecting participants in particular cells, though, necessarily distorts the MATH® CPS baseline so that it no longer mirrors the IQCS data along the dimensions of the 64 cell matrix. Therefore, during the calibration process the participation rate of CPS participants in

particular cells is allowed to vary so that the overall FSP baseline matches some larger and more important distributions. Consider the following example.

IQCS data show that there should be roughly 800 thousand FSP households with incomes below 50 percent of poverty, no public assistance income, and no elderly members.[12] 1993 CPS data aged to 1996, though, only show about 500 thousand *eligible* FSP households below 50 percent of poverty and with no public assistance income and no elderly members. To obtain a correct number of baseline participating FSP households below 50 percent of poverty, one of the larger and more important distributions, the model is calibrated to over-select as participants other households with incomes below 50 percent of poverty. In this example, the model over-selects households below 50 percent of poverty and *with* elderly members--households that otherwise would not have been simulated to participate. The end result is that although we obtain the correct number of households below 50 percent of poverty, we have too many households with elderly members.

How does all this relate to IQCS data error? If the IQCS estimate of 800 thousand FSP households below 50 percent of poverty and with no public assistance income and no elderly members was found to be overstated, and the true number to be 500 thousand instead, then it would not be necessary in the calibration of the MATH® CPS baseline to over-select households below 50 percent of poverty and *with* elderly members. This is only one example, but the point is that specific kinds of error in the IQCS data would affect the MATH® CPS baseline because of the way that the MATH® CPS baseline is calibrated to the IQCS data.

The above description is a simplification of the MATH® CPS calibration process. The calibration process not only tries to match key distributions, but it also tries to match the values of key variables such as average food stamp benefit, average gross income, and average net income over all participants. Therefore, the calibration of the MATH® CPS baseline is affected by errors both in the distribution of

[12]This is the precise definition of one of the cells of the 64 cell matrix.

participants in the IQCS data along the dimensions of the 64 cell matrix and in the average values of key variables.

The complexity and iterative nature of the calibration process makes it difficult to assess precisely the degree to which error in the IQCS data affect the MATH® CPS baseline. What can be done, though, is simply to compare the caseworker versus federal reviewer data in our sample of administrative case files drawn from the 1993 IQCS database for key variables used in the calibration process. Recall that the caseworker data is that which is entered in the IQCS database. Therefore, if we consider federal reviewer data "truth" then we can assess the degree to which errors in the IQCS data affect the MATH® CPS calibration process by comparing the degree to which the federal reviewer data differ from the caseworker data.

Caseworker and federal reviewer data are very similar in terms of the distribution of FSP households by household size and average FSP benefit (Table V.9). Federal reviewer data show slightly fewer cases with gross income below 50 percent of poverty and slightly more cases with gross income above 130 percent of poverty. Federal reviewer data show higher average gross incomes ($538 versus $495) and higher average net incomes ($292 versus $261) than caseworker data.[13] Finally, federal reviewer data show slightly more households with earned income, and slightly fewer households with children present.

Overall, despite some notable differences in caseworker and federal reviewer data, such as average gross income, in our estimation none of the differences are substantial enough to suggest that the MATH® CPS baseline would be substantially different were it calibrated to the corrected federal reviewer data rather than the original caseworker data as it appears in the IQCS data.

[13]These average differences, though, may be due to the small percentage of cases in the federal data with income well above 130 percent of poverty.

TABLE V.9

COMPARISON OF CASEWORKER WITH FEDERAL REVIEWER DATA FOR VARIABLES USED IN CALIBRATING THE MATH CPS MODEL

	Abstracted Data	
	Caseworker Data	Federal Reviewer
Distribution of Units by Size		
1	55	54
2	17	16
3-5	24	25
6+	4	5
Distribution of Units by Poverty Ratio		
<50	35	31
50-100	58	57
100-<130	8	9
130+	0.0	4
Percentage of Units with:		
Earned Income	18	21
Elderly	12	11
Children	28	24
Average Value of:		
FSP Benefit	$177	$169
Gross Income	$495	$538
Net Income	$261	$292

SOURCE: Data abstracted from a sample of administrative case files drawn from the 1993 IQCS database.

VI. CONCLUSIONS

In general, we find the IQCS data to be of high quality and currently the best source of information on the characteristics of the food stamp population. The sample size of the IQCS data is large, making for precise estimates, and the data are rich in terms of the variables available to describe the characteristics of the food stamp population. That the IQCS data contain the original FSP caseworker's data for each household, errors and all, rather than the corrected state or federal reviewer's data does not seem to detract significantly from the overall quality of the data. Moreover, we find that internal inconsistencies in the IQCS data, although fairly common and troublesome for analytic purposes, may be attributable in many if not most cases by factors other than reporting or coding errors.

Below, we summarize our conclusions on the quality of the IQCS data in terms of (1) data consistency, (2) sampling error, (3) editing and weighting procedures, and (4) congruity with survey data. Finally, we offer suggestions for future research on the quality of IQCS data.

A. DATA CONSISTENCY

Our analysis of a sample of administrative case files is inconclusive as to whether errors in caseworker data cause a substantial portion of the internal inconsistencies that we observe in the IQCS data. Findings derived from a comparison with federal data abstracted from sample cases are confounded by the high number of inconsistencies in the federal data that are attributable to the difficulty of abstracting these data. The clearest indication that factors other than caseworker error must cause a substantial portion of the inconsistencies is the finding that inconsistencies are only slightly more prevalent among cases with payment errors than among cases without payment errors.

We find that apparent inconsistencies in the IQCS data do not necessarily indicate poor quality. We do not find that the inclusion of original caseworker data, errors and all, in the IQCS data is a substantial cause of inconsistencies, although it no doubt explains some of them. In many instances, consistency test

failures occur not because of errors in items referenced in the tests but because the tests themselves are not sophisticated enough to account for all of the relevant provisions of FSP regulations. Specific deficiencies identified here account for one-fifth to two-fifths of the observed inconsistencies in particular tests. Correcting the tests and revising the QC database editing algorithms to take account of these findings is difficult, however. Variables critical to refining both the tests and the algorithms are not reported in the IQCS data. Nevertheless, improvements can be made by altering key assumptions of the current algorithms.

B. SAMPLING ERROR

The calculation of standard errors for estimates of the characteristics of the FSP population at the national level requires the application of procedures for complex samples because sampling rates differ by state and because states may stratify their samples differently. Estimates of the standard errors associated with sample estimates of a wide variety of characteristics of food stamp households in the IQCS database are published annually, along with the methodology used to calculate them.

C. SAMPLE SELECTION, EDITING, AND WEIGHTING

About 5 percent of the food stamp caseload is not eligible for QC review in a given month. An additional 5 percent of the sampled cases are excluded from the final database because their reviews could not be completed. Data on the characteristics of the excluded cases are not available, but it is possible to develop indirect inferences by contrasting states with different percentages of cases excluded. The cases that are not subject to review appear to be smaller than QC review units and to receive larger per-capita benefits. Cases whose reviews are not completed appear to be undifferentiated from reviewed cases with respect to benefit inaccuracy; but, like the excluded cases that are not subject to review, they appear to be smaller and to receive larger per-capita benefits.

Based on our analysis, we do not believe that the IQCS data editing procedures introduce error in the QC database. Computed measures of unit size and benefit level matched reported figures for over 99 percent of food stamp units. Moreover, the few differences that do exist are not systematic in nature.

While IQCS data weights in states that employ stratified sampling are based on potentially inaccurate estimates of stratum populations, in theory this should only increase the sampling error and not bias the estimates of participants and benefits in those states. Indeed, we found that per-capita benefit inaccuracy in states with stratified QC sample designs is no greater than in states with non-stratified QC sample designs.

D. ASSET DATA

Frequent differences between the caseworker and federal data with respect to asset holdings support the perception that the IQCS asset data are decidedly lower in quality than the IQCS income data. For 17 percent of the caseload the caseworker and federal reviewer disagree whether there are any countable assets at all. When they agree that a unit has assets, which they do for 19 percent of the caseload, they usually disagree (16 percent of the caseload) on the amount of assets.

While the differences between the caseworker and federal reviewer data reflect unfavorably on the overall quality of the asset data, they do not suggest that there is substantial net underreporting of assets by the caseworkers. Rather, the federal reviewer data show fewer assets than the caseworker data (14 percent of the total caseload) almost as often as they show more assets (19 percent of the caseload). The net result is that their differences largely cancel. The federal data show only a few more units with nonzero assets than do the caseworker data: 29 percent versus 26 percent. For units *with* assets the caseworker and federal data differ in their median values by only $154 (specifically, $179 versus $333). The federal median is still well below the prescribed FSP asset limits of $2,000 and $3,000.

E. CONGRUITY WITH SURVEY DATA

We find that errors in the IQCS data do not explain the discrepancies between SIPP estimates of the characteristics of FSP participants and IQCS data estimates. The caseworker and federal reviewer estimates of the proportion of FSP units with various income types is very similar for all items except for earnings, where 21 percent of FSP units have earned income according to federal reviewer data versus 19 percent according to caseworker data. This difference for earnings does not nearly explain the 15 percentage point discrepancy that was observed in 1983 between the number of FSP units with earned income according to SIPP (34 percent) and the IQCS (19 percent). These findings suggest that the discrepancies that exist between SIPP and IQCS data are in all likelihood due primarily to inadequacies of the SIPP data.[1]

We also evaluated the extent to which error in the IQCS data might affect the calibration of the baseline FSP participants for FCS's MATH® CPS microsimulation model. To do so we compared the caseworker and federal reviewer data in our sample of abstracted cases with respect to some of the variables used in the calibration. In our estimation, none of the differences between the caseworker and federal reviewer data are sufficiently marked to suggest that the MATH® CPS baseline would be substantially different were it to be calibrated to the corrected reviewer data rather than the original caseworker data as it appears in the IQCS data.

F. SUGGESTIONS FOR FUTURE RESEARCH

In preparing this quality profile, we compiled data from a sample of state and federal reviews. We abstracted data from worksheets as well as from the original Integrated Review Schedule coding forms that contain the data that become the IQCS database. What we learned about the process of collecting such data was as informative as the data themselves. The strategy of abstracting a fixed and large set of items

[1]See chapter 10 of Jabine et al. (1990) for a discussion of the quality of FSP data in the SIPP.

from these case records proved to be very difficult to accomplish--in large part due to the nonuniform way in which key items may be recorded. We concluded that the most fruitful use of such records might be as an aid in understanding the reasons why values reported in the IQCS data might appear to be inconsistent. We discovered a number of factors that might help to explain apparent inconsistencies, and these discoveries suggest possible changes to the editing routines that are used to reconcile inconsistent data during the preparation of the IQCS database.

It is clear that a careful review of a sample of case records was long overdue. We recommend additional review in order to obtain the knowledge needed to improve the editing procedures even further. Such review should follow a different strategy, however. We recommend that a sample of inconsistent cases be reviewed with the goal of determining precisely why each case is inconsistent and documenting the elements of each such finding in sufficient detail that the implications for a prospective editing algorithm at any point in the future can be ascertained.

In line with what recent National Academy of Sciences panels have recommended with respect to quality profiles in general, we recommend that this quality profile be updated periodically to incorporate new findings.

Table of Contents

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Table of Contents

APPENDIX A

1993 IQCS DATABASE LIST OF VARIABLES

Table of Contents

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
		STATE QC REVIEW DATA	
		Case Record Background Information	
0018	RECORD-KEY	–	–
0019	PERIOD	NA	
0020	REGION-CODE	NA	
0021	FIPS-CODE	State and Local Agency Code (2)	Two-digit code used by the National Bureau of Standards to classify a state. (Note: This is not a true FIPS code. FIPS codes are established by the National Bureau of Standards for classification of counties and county equivalents.) Alabama 01 / Alaska 02 / Arizona 04 / Arkansas 05 / California 06 / Colorado 08 / Connecticut 09 / Delaware 10 / DC 11 / Florida 12 / Georgia 13 / Hawaii 15 / Idaho 16 / Illinois 17 / Indiana 18 / Iowa 19 / Kansas 20 / Kentucky 21 / Louisiana 22 / Maine 23 / Maryland 24 / Mass. 25 / Michigan 26 / Minnesota 27 / Mississippi 28 / Missouri 29 / Montana 30 / Nebraska 31 / Nevada 32 / New Hamp. 33 / New Jersey 34 / New Mexico 35 / New York 36 / N. Carolina 37 / N. Dakota 38 / Ohio 39 / Oklahoma 40 / Oregon 41 / Penn. 42 / Puerto Rico 72 / Rhode Island 44 / S. Carolina 45 / S. Dakota 46 / Tennessee 47 / Texas 48 / Utah 49 / Vermont 50 / Virginia 51 / Virgin Is. 78 / Washington 53 / W. Virginia 54 / Wisconsin 55 / Wyoming 56 / Guam 66
0022	REVIEW-NO	Review Number (1)	The number assigned to a particular case review by the state QC agency.
0023	EDIT-ERROR-FLAG	NA	An edit error flag is assigned to a record which is missing crucial data.
0024	CASE-ID-NUM	Case Number (1a)	The number assigned to a particular case review by the local agency.
0025	DATE-RECEIVED	NA	
0026	YY	NA	
0027	MM	NA	
0028	DD	NA	
0029	REVIEW-TYPE	Review Type (5)	Single-digit number used to describe the type of QC review. 1 = AFDC/Food Stamp/Medicaid (15,284; 24.2%) 2 = AFDC/Food Stamp (33; 0.1%) 4 = Food Stamp/Medicaid (1,832; 2.9%) 6 = Food Stamp Only (45,892; 72.2%)
0030	STRATUM	Stratum (4)	Two-digit stratum/substratum code (for states which use a stratified QC sample).
0031	LOCAL-CODE	State and Local Agency Code (2)	Three-digit code used for grouping data by county or county equivalent.
0032	SAMPLE-DATE	NA	

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0033	YY	Sample Year (3)	Year for which case eligibility and payment status are under review.
0034	MM	Sample Month (3)	Month for which case eligibility and payment status are under review.
		Overall Error Findings	
0035	STATE-FINDINGS	–	–
0036	STATE-DISP	Disposition (6)	Disposition of review. 1 = Review completed (56,832; 90.1%) 2 = Not subject to review/listed in error (3,255; 5.2%) 4 = Recipient unwilling to give information (1,614; 2.6%) 5 = Unable to locate recipient (370; 0.6%) 6 = Not processed (33; 0.1%) 7 = Case deselected/correction for oversampling (544; 0.9%) 8 = Other (412; 0.7%)
0037	STATE-FIND	Review Findings (7)	Case status and any type of error detected (payment, issuance, or eligibility). 1 = No payment error/amount correct (42,651; 67.6%) 2 = Overpayment/overissuance (7,801; 12.4%) 3 = Underpayment/underissuance (4,954; 7.9%) 4 = Totally ineligible (1,530; 2.4%) 6,124 (9.7%) records are coded as missing or zero.
0038	STATE-ERROR	Amount of Error (8)	Dollar amount of any final case error as determined by the reviewer. Missing (48,763; 77.3%) Zero (12; 0.0%) $1 to $5 (0; 0.0%) Greater Than $5 (14,285; 22.7%)
		Detailed Error Findings	
0039	DETAILED-ERROR-FINDINGS	Detailed Error Findings (VI)	This section provides for the detailed coding of each distinct food stamp variance identified during the QC review.
0040	NUMBER-OF-ERRORS	NA	The sum of the number of variances coded on the file. 15,256 (24.2%) records have at least one error. 4,374 (6.9%) records have at least two errors.
0041	ERROR-FINDINGS	VI. Detailed Error Findings	–
		Error #1	
0042	PROGRAM-IDENT	Program Identification (66)	Identifies to which program an error pertains. All the errors on the Food Stamp QC File should be coded "2" (Food Stamp variance).
0043	ERROR-FINDING	Error Findings (67)	This field is optional for Food Stamps and therefore unreliable.
0044	CASE-MEMBERS-ERRORS	Case Members w/Errors (MA) (68)	This field is for Medicaid only.
0045	ELEMENT-CODE	Element (69)	Description of error type: 100 = Basic program requirements (2,665; 12.4% of errors) 200 = Resources/Assets (508; 2.4% of errors) 300 = Income (17,896; 83.3% of errors) 400 = Need Requirements (112; 0.5% of errors) 500 = Other (282; 1.3% of errors) 800 = Food Stamp Simplification Project (25; 0.1% of errors)
0046	NATURE-CODE	Nature Code (70)	Three-digit code which provides an even more detailed description of error type than "element code."
0047	AGENCY-OR-CLIENT	Agency or Client (71)	A set of two-digit codes used to indicate either agency or participant responsibility for each error identified.
0048	DOLLAR-AMOUNT	Dollar Amount (72)	The dollar amount of each separate error.

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0049	DISCOVERY	Discovery (73)	Single-digit code used to indicate how each error was discovered.
0050	VERIFICATION	Verification (74)	Single-digit code used to indicate how each error was verified.
0051	OCCURRENCE-DATE	Occurrence-Date (75)	Month and year in which error occurred.
0052	TIME-PERIOD	Occurrence-Time Period (75)	Time period during which error occurred (relative to date of most recent action on the particular case).
		Error #2	
0053	PROGRAM-IDENT	--	See Error #1
0054	ERROR-FINDING	--	See Error #1
0055	CASE-MEMBERS-ERRORS	--	See Error #1
0056	ELEMENT-CODE	--	See Error #1
0057	NATURE-CODE	--	See Error #1
0058	AGENCY-OR-CLIENT	--	See Error #1
0059	DOLLAR-AMOUNT	--	See Error #1
0060	DISCOVERY	--	See Error #1
0061	VERIFICATION	--	See Error #1
0062	OCCURRENCE-DATE	--	See Error #1
0063	TIME-PERIOD	--	See Error #1
		Error #3	
0064	PROGRAM-IDENT	--	See Error #1
0065	ERROR-FINDING	--	See Error #1
0066	CASE-MEMBERS-ERRORS	--	See Error #1
0067	ELEMENT-CODE	--	See Error #1
0068	NATURE-CODE	--	See Error #1
0069	AGENCY-OR-CLIENT	--	See Error #1
0070	DOLLAR-AMOUNT	--	See Error #1
0071	DISCOVERY	--	See Error #1
0072	VERIFICATION	--	See Error #1
0073	OCCURRENCE-DATE	--	See Error #1
0074	TIME-PERIOD	--	See Error #1
		Error #4	
0075	PROGRAM-IDENT	--	See Error #1
0076	ERROR-FINDING	--	See Error #1
0077	CASE-MEMBERS-ERRORS	--	See Error #1
0078	ELEMENT-CODE	--	See Error #1
0079	NATURE-CODE	--	See Error #1
0080	AGENCY-OR-CLIENT	--	See Error #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0081	DOLLAR-AMOUNT	–	See Error #1
0082	DISCOVERY	–	See Error #1
0083	VERIFICATION	–	See Error #1
0084	OCCURRENCE-DATE	–	See Error #1
0085	TIME-PERIOD	–	See Error #1
		Error #5	
0086	PROGRAM-IDENT	–	See Error #1
0087	ERROR-FINDING	–	See Error #1
0088	CASE-MEMBERS-ERRORS	–	See Error #1
0089	ELEMENT-CODE	–	See Error #1
0090	NATURE-CODE	–	See Error #1
0091	AGENCY-OR-CLIENT	–	See Error #1
0092	DOLLAR-AMOUNT	–	See Error #1
0093	DISCOVERY	–	See Error #1
0094	VERIFICATION	–	See Error #1
0095	OCCURRENCE-DATE	–	See Error #1
0096	TIME-PERIOD	–	See Error #1
		Error #6	
0097	PROGRAM-IDENT	–	See Error #1
0098	ERROR-FINDING	–	See Error #1
0099	CASE-MEMBERS-ERRORS	–	See Error #1
0100	ELEMENT-CODE	–	See Error #1
0101	NATURE-CODE	–	See Error #1
0102	AGENCY-OR-CLIENT	–	See Error #1
0103	DOLLAR-AMOUNT	–	See Error #1
0104	DISCOVERY	–	See Error #1
0105	VERIFICATION	–	See Error #1
0106	OCCURRENCE-DATE	–	See Error #1
0107	TIME-PERIOD	–	See Error #1
		Error #7	
0108	PROGRAM-IDENT	–	See Error #1
0109	ERROR-FINDING	–	See Error #1
0110	CASE-MEMBERS-ERRORS	–	See Error #1
0111	ELEMENT-CODE	–	See Error #1
0112	NATURE-CODE	–	See Error #1
0113	AGENCY-OR-CLIENT	–	See Error #1
0114	DOLLAR-AMOUNT	–	See Error #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0115	DISCOVERY	--	See Error #1
0116	VERIFICATION	--	See Error #1
0117	OCCURRENCE-DATE	--	See Error #1
0118	TIME-PERIOD	--	See Error #1
		Error #8	
0119	PROGRAM-IDENT	--	See Error #1
0120	ERROR-FINDING	--	See Error #1
0121	CASE-MEMBERS-ERRORS	--	See Error #1
0122	ELEMENT-CODE	--	See Error #1
0123	NATURE-CODE	--	See Error #1
0124	AGENCY-OR-CLIENT	--	See Error #1
0125	DOLLAR-AMOUNT	--	See Error #1
0126	DISCOVERY	--	See Error #1
0127	VERIFICATION	--	See Error #1
0128	OCCURRENCE-DATE	--	See Error #1
0129	TIME-PERIOD	--	See Error #1
		Error #9	
0130	PROGRAM-IDENT	--	See Error #1
0131	ERROR-FINDING	--	See Error #1
0132	CASE-MEMBERS-ERRORS	--	See Error #1
0133	ELEMENT-CODE	--	See Error #1
0134	NATURE-CODE	--	See Error #1
0135	AGENCY-OR-CLIENT	--	See Error #1
0136	DOLLAR-AMOUNT	--	See Error #1
0137	DISCOVERY	--	See Error #1
0138	VERIFICATION	--	See Error #1
0139	OCCURRENCE-DATE	--	See Error #1
0140	TIME-PERIOD	--	See Error #1
		Detailed Person-Level Information	
0141	DETAILED-PERSON LEVEL-INFO	III. Detailed Person-Level Information	--
0142	NUMBER-OF-PERSONS	NA	The number of persons for which data is actually coded on the file. This often differs with the reported number of persons in the food stamp unit.
0143	PERSON-ENTRY	--	--
		Person #1	
0144	CASE-AFFIL-FS	Food Stamp Case AFFIL (42)	Participation status in food stamp program for each household member (i.e. in the unit under review, or in another unit).

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0145	CASE-AFFIL-AFDC-MED	AFDC/MA Case AFFIL (43)	For Medicaid Review only.
0146	RELAT-HEAD-HOUSE	Relationship to Head of Household (44)	Code that shows the relationship of each household member to the household head (or principal person in household).
0147	AGE	Age (45)	Age of household member.
0148	SEX	Sex (46)	Sex of household member. 1 = Male 2 = Female 9 = Unknown
0149	RACE	Race (47)	Race of household member. 1 = White, not of Hispanic origin 2 = Black, not of Hispanic origin 3 = Hispanic 4 = Asian or Pacific Islander 5 = American Indian or Alaskan Native 9 = Unknown
0150	CITIZEN-STATUS	Citizenship Status (48)	Code describing the citizenship status of each household member.
0151	EDUCATIONAL-LEVEL	Education Level (49)	Code describing the highest level of education completed by each household member.
0152	WIN-FS-REG	Employment and Training Program Status (50)	Code describing the current employment and training program status of each household member.
0153	EMPLOY-STATUS	Employment Status (51)	Code describing the current employment status of each household member 16 year of age or older.
0154	INSTITU-STATUS	Institutional Status (52)	Medicaid code only.
0155	WAGE-SALARY-PYMT	Type of Income (54) Amount of Income (55)	Wages and salaries income.
0156	SELF-EMPLY-EARNINGS	Type of Income (54) Amount of Income (55)	Self-employment income.
0157	EARN-INCOME-TAX-CREDIT	Type of Income (54) Amount of Income (55)	Earned income tax credit.
0158	EARNED-INCOME	Type of Income (54) Amount of Income (55)	Other earned income.
0159	SSA-RR-INCOME	Type of Income (54) Amount of Income (55)	RSDI benefits.
0160	VETERAN-BENEFIT	Type of Income (54) Amount of Income (55)	Veterans benefits.

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0161	SSI-PYMT-FED	Type of Income (54) Amount of Income (55)	SSI benefits.
0162	UNEMPLY-COMPEN	Type of Income (54) Amount of Income (55)	Unemployment compensation.
0163	WORK-COMPEN	Type of Income (54) Amount of Income (55)	Workmen's compensation.
0164	DISAB-RETIREMENT	Type of Income (54) Amount of Income (55)	Other government benefits.
0165	FS-HOUSE-SUBSIDY	Type of Income (54) Amount of Income (55)	Value of Food Stamps/Housing subsidy. Not relevant since this is not counted as income when calculating eligibility and benefits.
0166	CONTRIBUTION	Type of Income (54) Amount of Income (55)	Contribution/income-in-kind.
0167	DEEMED	Type of Income (54) Amount of Income (55)	Deemed income.
0168	GA-SSI-STATE-SUPP	Type of Income (54) Amount of Income (55)	State Public Assistance (PA) or General Assistance (GA) income.
0169	LOANS	Type of Income (54) Amount of Income (55)	Educational grants/scholarships/loans.
0170	UNEARNED-INCOME	Type of Income (54) Amount of Income (55)	Other unearned income.
0171	AFDC-PAYMENT	Type of Income (54) Amount of Income (55)	AFDC benefits.
0172	SUPPORT-PAYMENT	Type of Income (54) Amount of Income (55)	Child support payments.
Person #2			
0173	CASE-AFFIL-FS	--	See Person #1
0174	CASE-AFFIL-AFDC-MED	--	See Person #1
0175	RELAT-HEAD-HOUSE	--	See Person #1
0176	AGE	--	See Person #1
0177	SEX	--	See Person #1
0178	RACE	--	See Person #1
0179	CITIZEN-STATUS	--	See Person #1
0180	EDUCATIONAL-LEVEL	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0181	WIN-FS-REG	--	See Person #1
0182	EMPLOY-STATUS	--	See Person #1
0183	INSTITU-STATUS	--	See Person #1
0184	WAGE-SALARY-PYMT	--	See Person #1
0185	SELF-EMPLY-EARNINGS	--	See Person #1
0186	EARN-INCOME-TAX-CREDIT	--	See Person #1
0187	EARNED-INCOME	--	See Person #1
0188	SSA-RR-INCOME	--	See Person #1
0189	VETERAN-BENEFIT	--	See Person #1
0190	SSI-PYMT-FED	--	See Person #1
0191	UNEMPLY-COMPEN	--	See Person #1
0192	WORK-COMPEN	--	See Person #1
0193	DISAB-RETIREMENT	--	See Person #1
0194	FS-HOUSE-SUBSIDY	--	See Person #1
0195	CONTRIBUTION	--	See Person #1
0196	DEEMED	--	See Person #1
0197	GA-SSI-STATE-SUPP	--	See Person #1
0198	LOANS	--	See Person #1
0199	UNEARNED-INCOME	--	See Person #1
0200	AFDC-PAYMENT	--	See Person #1
0201	SUPPORT-PAYMENT	--	See Person #1
		Person #3	
0202	CASE-AFFIL-FS	--	See Person #1
0203	CASE-AFFIL-AFDC-MED	--	See Person #1
0204	RELAT-HEAD-HOUSE	--	See Person #1
0205	AGE	--	See Person #1
0206	SEX	--	See Person #1
0207	RACE	--	See Person #1
0208	CITIZEN-STATUS	--	See Person #1
0209	EDUCATIONAL-LEVEL	--	See Person #1
0210	WIN-FS-REG	--	See Person #1
0211	EMPLOY-STATUS	--	See Person #1
0212	INSTITU-STATUS	--	See Person #1
0213	WAGE-SALARY-PYMT	--	See Person #1
0214	SELF-EMPLY-EARNINGS	--	See Person #1
0215	EARN-INCOME-TAX-CREDIT	--	See Person #1
0216	EARNED-INCOME	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0217	SSA-RR-INCOME	--	See Person #1
0218	VETERAN-BENEFIT	--	See Person #1
0219	SSI-PYMT-FED	--	See Person #1
0220	UNEMPLY-COMPEN	--	See Person #1
0221	WORK-COMPEN	--	See Person #1
0222	DISAB-RETIREMENT	--	See Person #1
0223	FS-HOUSE-SUBSIDY	--	See Person #1
0224	CONTRIBUTION	--	See Person #1
0225	DEEMED	--	See Person #1
0226	GA-SSI-STATE-SUPP	--	See Person #1
0227	LOANS	--	See Person #1
0228	UNEARNED-INCOME	--	See Person #1
0229	AFDC-PAYMENT	--	See Person #1
0230	SUPPORT-PAYMENT	--	See Person #1
		Person #4	
0231	CASE-AFFIL-FS	--	See Person #1
0232	CASE-AFFIL-AFDC-MED	--	See Person #1
0233	RELAT-HEAD-HOUSE	--	See Person #1
0234	AGE	--	See Person #1
0235	SEX	--	See Person #1
0236	RACE	--	See Person #1
0237	CITIZEN-STATUS	--	See Person #1
0238	EDUCATIONAL-LEVEL	--	See Person #1
0239	WIN-FS-REG	--	See Person #1
0240	EMPLOY-STATUS	--	See Person #1
0241	INSTITU-STATUS	--	See Person #1
0242	WAGE-SALARY-PYMT	--	See Person #1
0243	SELF-EMPLY-EARNINGS	--	See Person #1
0244	EARN-INCOME-TAX-CREDIT	--	See Person #1
0245	EARNED-INCOME	--	See Person #1
0246	SSA-RR-INCOME	--	See Person #1
0247	VETERAN-BENEFIT	--	See Person #1
0248	SSI-PYMT-FED	--	See Person #1
0249	UNEMPLY-COMPEN	--	See Person #1
0250	WORK-COMPEN	--	See Person #1
0251	DISAB-RETIREMENT	--	See Person #1
0252	FS-HOUSE-SUBSIDY	--	See Person #1
0253	CONTRIBUTION	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0254	DEEMED	--	See Person #1
0255	GA-SSI-STATE-SUPP	--	See Person #1
0256	LOANS	--	See Person #1
0257	UNEARNED-INCOME	--	See Person #1
0258	AFDC-PAYMENT	--	See Person #1
0259	SUPPORT-PAYMENT	--	See Person #1
		Person #5	
0260	CASE-AFFIL-FS	--	See Person #1
0261	CASE-AFFIL-AFDC-MED	--	See Person #1
0262	RELAT-HEAD-HOUSE	--	See Person #1
0263	AGE	--	See Person #1
0264	SEX	--	See Person #1
0265	RACE	--	See Person #1
0266	CITIZEN-STATUS	--	See Person #1
0267	EDUCATIONAL-LEVEL	--	See Person #1
0268	WIN-FS-REG	--	See Person #1
0269	EMPLOY-STATUS	--	See Person #1
0270	INSTITU-STATUS	--	See Person #1
0271	WAGE-SALARY-PYMT	--	See Person #1
0272	SELF-EMPLY-EARNINGS	--	See Person #1
0273	EARN-INCOME-TAX-CREDIT	--	See Person #1
0274	EARNED-INCOME	--	See Person #1
0275	SSA-RR-INCOME	--	See Person #1
0276	VETERAN-BENEFIT	--	See Person #1
0277	SSI-PYMT-FED	--	See Person #1
0278	UNEMPLY-COMPEN	--	See Person #1
0279	WORK-COMPEN	--	See Person #1
0280	DISAB-RETIREMENT	--	See Person #1
0281	FS-HOUSE-SUBSIDY	--	See Person #1
0282	CONTRIBUTION	--	See Person #1
0283	DEEMED	--	See Person #1
0284	GA-SSI-STATE-SUPP	--	See Person #1
0285	LOANS	--	See Person #1
0286	UNEARNED-INCOME	--	See Person #1
0287	AFDC-PAYMENT	--	See Person #1
0288	SUPPORT-PAYMENT	--	See Person #1
		Person #6	
0289	CASE-AFFIL-FS	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0290	CASE-AFFIL-AFDC-MED	--	See Person #1
0291	RELAT-HEAD-HOUSE	--	See Person #1
0292	AGE	--	See Person #1
0293	SEX	--	See Person #1
0294	RACE	--	See Person #1
0295	CITIZEN-STATUS	--	See Person #1
0296	EDUCATIONAL-LEVEL	--	See Person #1
0297	WIN-FS-REG	--	See Person #1
0298	EMPLOY-STATUS	--	See Person #1
0299	INSTITU-STATUS	--	See Person #1
0300	WAGE-SALARY-PYMT	--	See Person #1
0301	SELF-EMPLY-EARNINGS	--	See Person #1
0302	EARN-INCOME-TAX-CREDIT	--	See Person #1
0303	EARNED-INCOME	--	See Person #1
0304	SSA-RR-INCOME	--	See Person #1
0305	VETERAN-BENEFIT	--	See Person #1
0306	SSI-PYMT-FED	--	See Person #1
0307	UNEMPLY-COMPEN	--	See Person #1
0308	WORK-COMPEN	--	See Person #1
0309	DISAB-RETIREMENT	--	See Person #1
0310	FS-HOUSE-SUBSIDY	--	See Person #1
0311	CONTRIBUTION	--	See Person #1
0312	DEEMED	--	See Person #1
0313	GA-SSI-STATE-SUPP	--	See Person #1
0314	LOANS	--	See Person #1
0315	UNEARNED-INCOME	--	See Person #1
0316	AFDC-PAYMENT	--	See Person #1
0317	SUPPORT-PAYMENT	--	See Person #1
		Person #7	
0318	CASE-AFFIL-FS	--	See Person #1
0319	CASE-AFFIL-AFDC-MED	--	See Person #1
0320	RELAT-HEAD-HOUSE	--	See Person #1
0321	AGE	--	See Person #1
0322	SEX	--	See Person #1
0323	RACE	--	See Person #1
0324	CITIZEN-STATUS	--	See Person #1
0325	EDUCATIONAL-LEVEL	--	See Person #1
0326	WIN-FS-REG	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0327	EMPLOY-STATUS	--	See Person #1
0328	INSTITU-STATUS	--	See Person #1
0329	WAGE-SALARY-PYMT	--	See Person #1
0330	SELF-EMPLY-EARNINGS	--	See Person #1
0331	EARN-INCOME-TAX-CREDIT	--	See Person #1
0332	EARNED-INCOME	--	See Person #1
0333	SSA-RR-INCOME	--	See Person #1
0334	VETERAN-BENEFIT	--	See Person #1
0335	SSI-PYMT-FED	--	See Person #1
0336	UNEMPLY-COMPEN	--	See Person #1
0337	WORK-COMPEN	--	See Person #1
0338	DISAB-RETIREMENT	--	See Person #1
0339	FS-HOUSE-SUBSIDY	--	See Person #1
0340	CONTRIBUTION	--	See Person #1
0341	DEEMED	--	See Person #1
0342	GA-SSI-STATE-SUPP	--	See Person #1
0343	LOANS	--	See Person #1
0344	UNEARNED-INCOME	--	See Person #1
0345	AFDC-PAYMENT	--	See Person #1
0346	SUPPORT-PAYMENT	--	See Person #1
		Person #8	
0347	CASE-AFFIL-FS	--	See Person #1
0348	CASE-AFFIL-AFDC-MED	--	See Person #1
0349	RELAT-HEAD-HOUSE	--	See Person #1
0350	AGE	--	See Person #1
0351	SEX	--	See Person #1
0352	RACE	--	See Person #1
0353	CITIZEN-STATUS	--	See Person #1
0354	EDUCATIONAL-LEVEL	--	See Person #1
0355	WIN-FS-REG	--	See Person #1
0356	EMPLOY-STATUS	--	See Person #1
0357	INSTITU-STATUS	--	See Person #1
0358	WAGE-SALARY-PYMT	--	See Person #1
0359	SELF-EMPLY-EARNINGS	--	See Person #1
0360	EARN-INCOME-TAX-CREDIT	--	See Person #1
0361	EARNED-INCOME	--	See Person #1
0362	SSA-RR-INCOME	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0363	VETERAN-BENEFIT	--	See Person #1
0364	SSI-PYMT-FED	--	See Person #1
0365	UNEMPLY-COMPEN	--	See Person #1
0366	WORK-COMPEN	--	See Person #1
0367	DISAB-RETIREMENT	--	See Person #1
0368	FS-HOUSE-SUBSIDY	--	See Person #1
0369	CONTRIBUTION	--	See Person #1
0370	DEEMED	--	See Person #1
0371	GA-SSI-STATE-SUPP	--	See Person #1
0372	LOANS	--	See Person #1
0373	UNEARNED-INCOME	--	See Person #1
0374	AFDC-PAYMENT	--	See Person #1
0375	SUPPORT-PAYMENT	--	See Person #1
		Person #9	
0376	CASE-AFFIL-FS	--	See Person #1
0377	CASE-AFFIL-AFDC-MED	--	See Person #1
0378	RELAT-HEAD-HOUSE	--	See Person #1
0379	AGE	--	See Person #1
0380	SEX	--	See Person #1
0381	RACE	--	See Person #1
0382	CITIZEN-STATUS	--	See Person #1
0383	EDUCATIONAL-LEVEL	--	See Person #1
0384	WIN-FS-REG	--	See Person #1
0385	EMPLOY-STATUS	--	See Person #1
0386	INSTITU-STATUS	--	See Person #1
0387	WAGE-SALARY-PYMT	--	See Person #1
0388	SELF-EMPLY-EARNINGS	--	See Person #1
0389	EARN-INCOME-TAX-CREDIT	--	See Person #1
0390	EARNED-INCOME	--	See Person #1
0391	SSA-RR-INCOME	--	See Person #1
0392	VETERAN-BENEFIT	--	See Person #1
0393	SSI-PYMT-FED	--	See Person #1
0394	UNEMPLY-COMPEN	--	See Person #1
0395	WORK-COMPEN	--	See Person #1
0396	DISAB-RETIREMENT	--	See Person #1
0397	FS-HOUSE-SUBSIDY	--	See Person #1
0398	CONTRIBUTION	--	See Person #1
0399	DEEMED	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0400	GA-SSI-STATE-SUPP	--	See Person #1
0401	LOANS	--	See Person #1
0402	UNEARNED-INCOME	--	See Person #1
0403	AFDC-PAYMENT	--	See Person #1
0404	SUPPORT-PAYMENT	--	See Person #1
		Person #10	
0405	CASE-AFFIL-FS	--	See Person #1
0406	CASE-AFFIL-AFDC-MED	--	See Person #1
0407	RELAT-HEAD-HOUSE	--	See Person #1
0408	AGE	--	See Person #1
0409	SEX	--	See Person #1
0410	RACE	--	See Person #1
0411	CITIZEN-STATUS	--	See Person #1
0412	EDUCATIONAL-LEVEL	--	See Person #1
0413	WIN-FS-REG	--	See Person #1
0414	EMPLOY-STATUS	--	See Person #1
0415	INSTITU-STATUS	--	See Person #1
0416	WAGE-SALARY-PYMT	--	See Person #1
0417	SELF-EMPLY-EARNINGS	--	See Person #1
0418	EARN-INCOME-TAX-CREDIT	--	See Person #1
0419	EARNED-INCOME	--	See Person #1
0420	SSA-RR-INCOME	--	See Person #1
0421	VETERAN-BENEFIT	--	See Person #1
0422	SSI-PYMT-FED	--	See Person #1
0423	UNEMPLY-COMPEN	--	See Person #1
0424	WORK-COMPEN	--	See Person #1
0425	DISAB-RETIREMENT	--	See Person #1
0426	FS-HOUSE-SUBSIDY	--	See Person #1
0427	CONTRIBUTION	--	See Person #1
0428	DEEMED	--	See Person #1
0429	GA-SSI-STATE-SUPP	--	See Person #1
0430	LOANS	--	See Person #1
0431	UNEARNED-INCOME	--	See Person #1
0432	AFDC-PAYMENT	--	See Person #1
0433	SUPPORT-PAYMENT	--	See Person #1
		Person #11	
0434	CASE-AFFIL-FS	--	See Person #1
0435	CASE-AFFIL-AFDC-MED	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0436	RELAT-HEAD-HOUSE	--	See Person #1
0437	AGE	--	See Person #1
0438	SEX	--	See Person #1
0439	RACE	--	See Person #1
0440	CITIZEN-STATUS	--	See Person #1
0441	EDUCATIONAL-LEVEL	--	See Person #1
0442	WIN-FS-REG	--	See Person #1
0443	EMPLOY-STATUS	--	See Person #1
0444	INSTITU-STATUS	--	See Person #1
0445	WAGE-SALARY-PYMT	--	See Person #1
0446	SELF-EMPLY-EARNINGS	--	See Person #1
0447	EARN-INCOME-TAX-CREDIT	--	See Person #1
0448	EARNED-INCOME	--	See Person #1
0449	SSA-RR-INCOME	--	See Person #1
0450	VETERAN-BENEFIT	--	See Person #1
0451	SSI-PYMT-FED	--	See Person #1
0452	UNEMPLY-COMPEN	--	See Person #1
0453	WORK-COMPEN	--	See Person #1
0454	DISAB-RETIREMENT	--	See Person #1
0455	FS-HOUSE-SUBSIDY	--	See Person #1
0456	CONTRIBUTION	--	See Person #1
0457	DEEMED	--	See Person #1
0458	GA-SSI-STATE-SUPP	--	See Person #1
0459	LOANS	--	See Person #1
0460	UNEARNED-INCOME	--	See Person #1
0461	AFDC-PAYMENT	--	See Person #1
0462	SUPPORT-PAYMENT	--	See Person #1
		Person #12	
0463	CASE-AFFIL-FS	--	See Person #1
0464	CASE-AFFIL-AFDC-MED	--	See Person #1
0465	RELAT-HEAD-HOUSE	--	See Person #1
0466	AGE	--	See Person #1
0467	SEX	--	See Person #1
0468	RACE	--	See Person #1
0469	CITIZEN-STATUS	--	See Person #1
0470	EDUCATIONAL-LEVEL	--	See Person #1
0471	WIN-FS-REG	--	See Person #1
0472	EMPLOY-STATUS	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0473	INSTITU-STATUS	--	See Person #1
0474	WAGE-SALARY-PYMT	--	See Person #1
0475	SELF-EMPLY-EARNINGS	--	See Person #1
0476	EARN-INCOME-TAX-CREDIT	--	See Person #1
0477	EARNED-INCOME	--	See Person #1
0478	SSA-RR-INCOME	--	See Person #1
0479	VETERAN-BENEFIT	--	See Person #1
0480	SSI-PYMT-FED	--	See Person #1
0481	UNEMPLY-COMPEN	--	See Person #1
0482	WORK-COMPEN	--	See Person #1
0483	DISAB-RETIREMENT	--	See Person #1
0484	FS-HOUSE-SUBSIDY	--	See Person #1
0485	CONTRIBUTION	--	See Person #1
0486	DEEMED	--	See Person #1
0487	GA-SSI-STATE-SUPP	--	See Person #1
0488	LOANS	--	See Person #1
0489	UNEARNED-INCOME	--	See Person #1
0490	AFDC-PAYMENT	--	See Person #1
0491	SUPPORT-PAYMENT	--	See Person #1
		Person #13	
0492	CASE-AFFIL-FS	--	See Person #1
0493	CASE-AFFIL-AFDC-MED	--	See Person #1
0494	RELAT-HEAD-HOUSE	--	See Person #1
0495	AGE	--	See Person #1
0496	SEX	--	See Person #1
0497	RACE	--	See Person #1
0498	CITIZEN-STATUS	--	See Person #1
0499	EDUCATIONAL-LEVEL	--	See Person #1
0500	WIN-FS-REG	--	See Person #1
0501	EMPLOY-STATUS	--	See Person #1
0502	INSTITU-STATUS	--	See Person #1
0503	WAGE-SALARY-PYMT	--	See Person #1
0504	SELF-EMPLY-EARNINGS	--	See Person #1
0505	EARN-INCOME-TAX-CREDIT	--	See Person #1
0506	EARNED-INCOME	--	See Person #1
0507	SSA-RR-INCOME	--	See Person #1
0508	VETERAN-BENEFIT	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0509	SSI-PYMT-FED	--	See Person #1
0510	UNEMPLY-COMPEN	--	See Person #1
0511	WORK-COMPEN	--	See Person #1
0512	DISAB-RETIREMENT	--	See Person #1
0513	FS-HOUSE-SUBSIDY	--	See Person #1
0514	CONTRIBUTION	--	See Person #1
0515	DEEMED	--	See Person #1
0516	GA-SSI-STATE-SUPP	--	See Person #1
0517	LOANS	--	See Person #1
0518	UNEARNED-INCOME	--	See Person #1
0519	AFDC-PAYMENT	--	See Person #1
0520	SUPPORT-PAYMENT	--	See Person #1
		Person #14	
0521	CASE-AFFIL-FS	--	See Person #1
0522	CASE-AFFIL-AFDC-MED	--	See Person #1
0523	RELAT-HEAD-HOUSE	--	See Person #1
0524	AGE	--	See Person #1
0525	SEX	--	See Person #1
0526	RACE	--	See Person #1
0527	CITIZEN-STATUS	--	See Person #1
0528	EDUCATIONAL-LEVEL	--	See Person #1
0529	WIN-FS-REG	--	See Person #1
0530	EMPLOY-STATUS	--	See Person #1
0531	INSTITU-STATUS	--	See Person #1
0532	WAGE-SALARY-PYMT	--	See Person #1
0533	SELF-EMPLY-EARNINGS	--	See Person #1
0534	EARN-INCOME-TAX-CREDIT	--	See Person #1
0535	EARNED-INCOME	--	See Person #1
0536	SSA-RR-INCOME	--	See Person #1
0537	VETERAN-BENEFIT	--	See Person #1
0538	SSI-PYMT-FED	--	See Person #1
0539	UNEMPLY-COMPEN	--	See Person #1
0540	WORK-COMPEN	--	See Person #1
0541	DISAB-RETIREMENT	--	See Person #1
0542	FS-HOUSE-SUBSIDY	--	See Person #1
0543	CONTRIBUTION	--	See Person #1
0544	DEEMED	--	See Person #1
0545	GA-SSI-STATE-SUPP	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0546	LOANS	--	See Person #1
0547	UNEARNED-INCOME	--	See Person #1
0548	AFDC-PAYMENT	--	See Person #1
0549	SUPPORT-PAYMENT	--	See Person #1
		Person #15	
0550	CASE-AFFIL-FS	--	See Person #1
0551	CASE-AFFIL-AFDC-MED	--	See Person #1
0552	RELAT-HEAD-HOUSE	--	See Person #1
0553	AGE	--	See Person #1
0554	SEX	--	See Person #1
0555	RACE	--	See Person #1
0556	CITIZEN-STATUS	--	See Person #1
0557	EDUCATIONAL-LEVEL	--	See Person #1
0558	WIN-FS-REG	--	See Person #1
0559	EMPLOY-STATUS	--	See Person #1
0560	INSTITU-STATUS	--	See Person #1
0561	WAGE-SALARY-PYMT	--	See Person #1
0562	SELF-EMPLY-EARNINGS	--	See Person #1
0563	EARN-INCOME-TAX-CREDIT	--	See Person #1
0564	EARNED-INCOME	--	See Person #1
0565	SSA-RR-INCOME	--	See Person #1
0566	VETERAN-BENEFIT	--	See Person #1
0567	SSI-PYMT-FED	--	See Person #1
0568	UNEMPLY-COMPEN	--	See Person #1
0569	WORK-COMPEN	--	See Person #1
0570	DISAB-RETIREMENT	--	See Person #1
0571	FS-HOUSE-SUBSIDY	--	See Person #1
0572	CONTRIBUTION	--	See Person #1
0573	DEEMED	--	See Person #1
0574	GA-SSI-STATE-SUPP	--	See Person #1
0575	LOANS	--	See Person #1
0576	UNEARNED-INCOME	--	See Person #1
0577	AFDC-PAYMENT	--	See Person #1
0578	SUPPORT-PAYMENT	--	See Person #1
		Person #16	
0579	CASE-AFFIL-FS	--	See Person #1
0580	CASE-AFFIL-AFDC-MED	--	See Person #1
0581	RELAT-HEAD-HOUSE	--	See Person #1

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0582	AGE	--	See Person #1
0583	SEX	--	See Person #1
0584	RACE	--	See Person #1
0585	CITIZEN-STATUS	--	See Person #1
0586	EDUCATIONAL-LEVEL	--	See Person #1
0587	WIN-FS-REG	--	See Person #1
0588	EMPLOY-STATUS	--	See Person #1
0589	INSTITU-STATUS	--	See Person #1
0590	WAGE-SALARY-PYMT	--	See Person #1
0591	SELF-EMPLY-EARNINGS	--	See Person #1
0592	EARN-INCOME-TAX-CREDIT	--	See Person #1
0593	EARNED-INCOME	--	See Person #1
0594	SSA-RR-INCOME	--	See Person #1
0595	VETERAN-BENEFIT	--	See Person #1
0596	SSI-PYMT-FED	--	See Person #1
0597	UNEMPLY-COMPEN	--	See Person #1
0598	WORK-COMPEN	--	See Person #1
0599	DISAB-RETIREMENT	--	See Person #1
0600	FS-HOUSE-SUBSIDY	--	See Person #1
0601	CONTRIBUTION	--	See Person #1
0602	DEEMED	--	See Person #1
0603	GA-SSI-STATE-SUPP	--	See Person #1
0604	LOANS	--	See Person #1
0605	UNEARNED-INCOME	--	See Person #1
0606	AFDC-PAYMENT	--	See Person #1
0607	SUPPORT-PAYMENT	--	See Person #1
	Case-Record Information		
0608	CASE-INFORMATION	II. Case Information	--
0609	DATE-MOST-RECENT-OPENING	Most Recent Opening (9)	Month, day, and year of the initial certification for the current uninterrupted period of participation.
0610	PRIOR-ASSISTANCE	Prior Assistance (9a)	Indicates if the recipient has received assistance prior to the most recent opening.
0611	DATE-MOST-RECENT-ACTION	Most Recent Action (10)	Month, day, and year the unit was certified or recertified for participation in the sample month under review.
0612	TYPE-OF-ACTION	Type of Action (11)	Code which classifies a unit by whether it is receiving initial approval or certification; or recertification.
0613	MEMBERS	No. of Case Members (12)	Number of persons for the case under review whose needs, income, and resources were included in eligibility and benefit calculations by the agency.
0614	LIQUID-ASSETS	Liquid Assets (13)	Total of all liquid resources as of review date.

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0615	REAL-PROPERTY	Real Property (Excl. Home) (14)	Total of all real property resources as of review date.
0616	VEHICLE-ASSETS	Countable Vehicle Assets (15)	Total of all countable vehicle assets as of review date.
0617	NON-LIQUID-ASSETS	Other Non Liquid Assets (16)	Total of all other non-liquid assets as of review date.
0618	--	--	--
0619	CASE-INFORMATION-FOOD-STAMP	Case Information--Food Stamp	--
0620	CASE-CLASSIFICATION	Case Classification (27)	Code for who processed the case.
0621	MONTHS-IN-CERT-PD	Months in Certif. Period (28)	The number of months the unit was certified to participate during the initial certification or recertification.

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0635	FINDINGS	NA	Case status and any type of error detected (payment, issuance, or eligibility) (as determined by federal re-reviewer for subsample). 1 = No payment error/amount correct (13,811; 73.1% of re-review data) 2 = Overpayment/overissuance (2,709; 14.3% of re-review data) 3 = Underpayment/underissuance (1,734; 9.2% of re-review data) 4 = Totally ineligible (527; 2.8% of re-review data) 5 = Unknown field (0; 0.0% of re-review data) 6 = Unknown field (0; 0.0% of re-review data) 7 = Unknown field (2; 0.0% of re-review data) 8 = Unknown field (9; 0.0% of re-review data) 9 = Unknown field (11; 0.1% of re-review data) (Data 0 or missing = 80; 0.4% of re-review data)
0636	BENEFIT-AMOUNT	NA	Amount of food stamp benefit actually received (as determined by federal re-reviewer for subsample). (BENEFIT-AMOUNT > 0: 18,780; 99.5% of re-review data) (BENEFIT-AMOUNT = 0 or missing: 103; 0.5% of re-review data)
0637	ERROR-AMOUNT	NA	Amount of food stamp benefit error (as determined by federal re-reviewer for subsample). (ERROR-AMOUNT > 4,971: 26.3% of re-review data) (ERROR-AMOUNT = 0 or missing: 13,912; 73.7% of re-review data)
0638	CONCURRENCE	NA	Federal re-review concurrence with state review (as determined by federal re-reviewer for subsample). 1 = agree entirely with state: 17,970; 95.2% of re-review data 2 = disagree with error amount coded by state: 719; 3.8% of re-review data 3 = agree with error amount, but disagree with allotment: 96; 0.5% of re-review data) 4 = disagree with disposition by state: 91; 0.5% of re-review data (Data 0 or missing = 7; 0.0% of re-review data)
		Variance Data	
0639	VARIANCE-DATA	–	–
0640	NUMBER-OF-VARIANCES	NA	Empty Field
0641	VARIANCE-ENTRY	–	–
		Variance #1 (All Fields Empty)	
0642	ERROR-FINDING	NA	Empty Field
0643	ERROR-ELEMENT	NA	Empty Field
0644	NATURE	NA	Empty Field
0645	AGENCY-CLIENT	NA	Empty Field
0646	DOLLAR-AMOUNT	NA	Empty Field
0647	DISCOVERY	NA	Empty Field
0648	VERIFICATION	NA	Empty Field
0649	OCCURRENCE-DATE	NA	Empty Field
0650	YY	NA	Empty Field
0651	MM	NA	Empty Field
0652	TIME-PERIOD	NA	Empty Field
		Variance #2	
0653	ERROR-FINDING	NA	Empty Field
0654	ERROR-ELEMENT	NA	Empty Field
0655	NATURE	NA	Empty Field
0656	AGENCY-CLIENT	NA	Empty Field
0657	DOLLAR-AMOUNT	NA	Empty Field

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0658	DISCOVERY	NA	Empty Field
0659	VERIFICATION	NA	Empty Field
0660	OCCURRENCE-DATE	NA	Empty Field
0661	YY	NA	Empty Field
0662	MM	NA	Empty Field
0663	TIME-PERIOD	NA	Empty Field
		Variance #3	
0664	ERROR-FINDING	NA	Empty Field
0665	ERROR-ELEMENT	NA	Empty Field
0666	NATURE	NA	Empty Field
0667	AGENCY-CLIENT	NA	Empty Field
0668	DOLLAR-AMOUNT	NA	Empty Field
0669	DISCOVERY	NA	Empty Field
0670	VERIFICATION	NA	Empty Field
0671	OCCURRENCE-DATE	NA	Empty Field
0672	YY	NA	Empty Field
0673	MM	NA	Empty Field
0674	TIME-PERIOD	NA	Empty Field
		Variance #4	
0675	ERROR-FINDING	NA	Empty Field
0676	ERROR-ELEMENT	NA	Empty Field
0677	NATURE	NA	Empty Field
0678	AGENCY-CLIENT	NA	Empty Field
0679	DOLLAR-AMOUNT	NA	Empty Field
0680	DISCOVERY	NA	Empty Field
0681	VERIFICATION	NA	Empty Field
0682	OCCURRENCE-DATE	NA	Empty Field
0683	YY	NA	Empty Field
0684	MM	NA	Empty Field
0685	TIME-PERIOD	NA	Empty Field
		Variance #5	
0686	ERROR-FINDING	NA	Empty Field
0687	ERROR-ELEMENT	NA	Empty Field
0688	NATURE	NA	Empty Field
0689	AGENCY-CLIENT	NA	Empty Field
0690	DOLLAR-AMOUNT	NA	Empty Field
0691	DISCOVERY	NA	Empty Field
0692	VERIFICATION	NA	Empty Field

Reference	IQCS Variable Name	Integrated Review Schedule (IRS) Name & No.	Description
0693	OCCURRENCE-DATE	NA	Empty Field
0694	YY	NA	Empty Field
0695	MM	NA	Empty Field
0696	TIME-PERIOD	NA	Empty Field
0697	QC-NUMBER	NA	Zero or Missing for)

Table of Contents

Table of Contents

APPENDIX B

QC REVIEW WORKSHEET
(FORM FNS-380)

Table of Contents

Table of Contents

WORKSHEET FOR INTEGRATED AFDC, ADULT, FOOD STAMPS AND MEDICAID ELIGIBILITY QUALITY CONTROL REVIEWS

Form Approved
OMB No. 0970-0072

PRIVACY ACT/PAPERWORK ACT NOTICE: This report is required under provisions of 45 CFR 205.40 (AFDC), 7 CFR 275.14 (Food Stamp) and 42 CFR 431.800 (Medicaid). This information is needed for the review of State performance in determining recipient eligibility. The information is used to determine State compliance and failure to report may result in a finding of non-compliance.

A. IDENTIFYING INFORMATION

PROGRAMS UNDER REVIEW

☐ AFDC ☐ ADULT	☐ FOOD STAMPS ☐ ACTIVE ☐ NEGATIVE	☐ MEDICAID ☐ AFDC ☐ AFDC RELATED ☐ SSI ☐ SSI RELATED	☐ DUAL COVERAGE ☐ NEEDY INDIVIDUAL UNDER 21

1. LOCAL AGENCY: _____
2. CASE NAME: _____
3. ADDRESS: _____
4. PHONE NUMBER: _____
5. DIRECTIONS TO LOCATE: _____

	AFDC/ADULT	FOOD STAMPS	MEDICAID
6. CASE NUMBER(S)			
7. REVIEW NUMBER(S)			
8. REVIEW DATE/MONTH			
9. DATE OF MOST RECENT OPENING			
10. MOST RECENT ACTION a. Date b. Type			
11. CERTIFICATION PERIOD		from: to:	from: to:
12. PARTICIPATED DURING SAMPLE MONTH		☐ YES ☐ NO	
13. REC'D EXPEDITED SERVICE		☐ YES ☐ NO	
14. REVIEWER(S)			
15. DATE(S) ASSIGNED			
16. DATE OF CASE READING(S)			
17. DATE OF HOME VISIT(S)			
18. DATE(S) COMPLETED			
19. SUPERVISOR(S)			
20. DATE(S) CLEARED			

B. PERSONS LIVING IN THE HOME

	NAME	BIRTHDATE	AGE	RELATIONSHIP OR SIGNIFICANCE	SOCIAL SECURITY NUMBER	AFDC/ADULT Recip.	AFDC/ADULT Elig.	FS Recip.	MEDICAID Recip	MEDICAID Elig.	MEDICAID Agy. Cert. OMB
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

C. SIGNIFICANT PERSONS NOT LIVING IN THE HOME

	NAME	RELATIONSHIP OR SIGNIFICANCE	SOCIAL SECURITY NUMBER	ADDRESS	PHONE NUMBER	FINANCIAL SUPPORT
10						
12						
13						
14						
15						

D. REVIEW FINDINGS

AFDC/ADULT

GRANT AMOUNT _____

☐ AMOUNT CORRECT
☐ OVERPAYMENT
☐ UNDERPAYMENT
☐ INELIGIBLE

REVIEW NOT COMPLETED ☐

AMOUNT IN ERROR _____

NUMBER OF ELEMENTS IN ERROR _____

FOOD STAMPS

ALLOTMENT _____

☐ AMOUNT CORRECT
☐ OVERISSUANCE
☐ UNDERISSUANCE
☐ INELIGIBLE

AMOUNT IN ERROR _____

MEDICAID

ELIGIBILITY STATUS

☐ ELIGIBLE
☐ INELIGIBLE
☐ UNDERSTATED LIABILITY
☐ OVERSTATED LIABILITY
☐ INELIGIBLE CASE MEMBER(S)
☐ INELIGIBLE SERVICE(S)

NUMBER OF ELEMENTS IN ERROR _____

REVIEW NOT COMPLETED ☐

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
110 AGE	BASIC PROGRAM REQUIREMENTS (100)		1 2 3	1 2 3	1 2 3	1 2 3
111 STUDENT STATUS			1 2 3	1 2 3	1 2 3	1 2 3
120 RELATIONSHIP			1 2 3		1 2 3	
130 CITIZENSHIP AND ALIENAGE			1 2 3	1 2 3	1 2 3	1 2 3
140 RESIDENCY			1 2 3	1 2 3	1 2 3	1 2 3

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
150 HOUSEHOLD COMPOSITION			1 2 3	1 2 3	1 2 3	1 2 3
151 LIVING ARRANGEMENT			1 2 3		1 2 3	1 2 3
160 EMPLOYMENT AND TRAINING PROGRAMS			1 2 3	1 2 3	1 2 3	
162 REGISTRANT REQUIREMENTS				1 2 3		
163 VOLUNTARY QUIT				1 2 3		
164 OPTIONAL WORKFARE				1 2 3		

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
170 SOCIAL SECURITY NUMBER			1 2 3	1 2 3	1 2 3	1 2 3
CATEGORICAL RELATEDNESS:						
181 DEATH						
182 INCAPACITY			1 2 3		1 2 3	
183 CONTINUED ABSENCE						
184 UNEMPLOYED PARENT						
185 BLINDNESS/DISABILITY DETERMINATION					1 2 3	1 2 3
186 OTHER CATEGORICAL RELATEDNESS						

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
CHILD SUPPORT PROGRAM:			1	[redacted]		
191 ASSIGNMENT OF SUPPORT			2			
			3			
192 COOPERATION IN SUPPORT ACTIVITIES			1			
			2			
			3			
LIQUID RESOURCES:	RESOURCES (200)					
211 BANK ACCOUNTS OR CASH ON HAND			1	1	1	1
			2	2	2	2
			3	3	3	3
212 NONRECURRING LUMP-SUM PAYMENTS			[redacted]	1	1	1
				2	2	2
				3	3	3
213 OTHER LIQUID ASSETS AND PERSONAL PROPERTY			1	1	1	1
			2	2	2	2
			3	3	3	3

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
NON-LIQUID RESOURCES:						
221 REAL PROPERTY			1	1	1	1
			2	2	2	2
			3	3	3	3
222 VEHICLE			1	1	1	1
			2	2	2	2
			3	3	3	3
223 LIFE INSURANCE			1		1	1
			2		2	2
			3		3	3
224 OTHER NON-LIQUID RESOURCES			1	1	1	1
			2	2	2	2
			3	3	3	3

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
225 COMBINED RESOURCES						
			1	1	1	1
			2	2	2	2
			3	3	3	3
EARNED INCOME:		INCOME (300)	1	1	1	1
311 WAGES AND SALARIES			2	2	2	2
			3	3	3	3
			1	1	1	1
312 SELF-EMPLOYMENT			2	2	2	2
			3	3	3	3
313 EARNED INCOME CREDIT					1	
					2	
					3	
			1	1	1	1
314 OTHER EARNED INCOME			2	2	2	2
			3	3	3	3

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

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			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
EARNED INCOME DISREGARDS/DEDUCTIONS:			1 2 3	1 2 3	1 2 3	1 2 3
321 EARNED INCOME DEDUCTIONS						
322 WORK RELATED EXPENSES			1 2 3		1 2 3	1 2 3
323 CHILD OR DEPENDENT CARE			1 2 3	1 2 3	1 2 3	
UNEARNED INCOME:			1 2 3	1 2 3	1 2 3	1 2 3
331 RSDI BENEFITS						
332 VETERANS BENEFITS			1 2 3	1 2 3	1 2 3	1 2 3
333 SSI AND/OR STATE SSI SUPPLEMENT			1 2 3	1 2 3	1 2 3	1 2 3

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
334 UNEMPLOYMENT COMPENSATION			1	1	1	1
			2	2	2	2
			3	3	3	3
335 WORKER'S COMPENSATION			1	1	1	1
			2	2	2	2
			3	3	3	3
336 OTHER GOVERNMENT BENEFITS			1	1	1	1
			2	2	2	2
			3	3	3	3
341 VALUE OF FOOD STAMPS/ HOUSING SUBSIDY			1		1	
			2		2	
			3		3	
342 CONTRIBUTIONS/ INCOME-IN-KIND			1	1	1	1
			2	2	2	2
			3	3	3	3

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
343 DEEMED INCOME			1 2 3	1 2 3	1 2 3	1 2 3
344 PA OR GA			1 2 3	1 2 3	1 2 3	1 2 3
345 EDUCATIONAL GRANTS/ SCHOLARSHIPS/LOANS			1 2 3	1 2 3	1 2 3	1 2 3
346 OTHER			1 2 3	1 2 3	1 2 3	1 2 3
347 AFDC			1 2 3	1 2 3		1 2 3

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
360 SUPPORT PAYMENTS MADE TO CHILD SUPPORT AGENCY			1 2 3	1 2 3	1 2 3	
OTHER DISREGARDS/ DEDUCTIONS: 361 STANDARD DEDUCTION				1 2 3		1 2 3
362 UNEARNED INCOME DEDUCTION			1 2 3		1 2 3	1 2 3

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No

Table of Contents

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
363 SHELTER DEDUCTION				1 2 3		
364 STANDARD UTILITY ALLOWANCE				1 2 3		
365 MEDICAL DEDUCTIONS				1 2 3		

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
371 COMBINED GROSS INCOME			1 2 3	1 2 3	1 2 3	
372 COMBINED NET INCOME			1 2 3	1 2 3	1 2 3	
BASIC BUDGETARY ALLOWANCE:	NEED-REQUIREMENTS (400)					
411 SHELTER ONLY			1 2 3		1 2 3	1 2 3
412 OTHER BASIC BUDGETARY ALLOWANCE (SUBSISTENCE)			1 2 3		1 2 3	1 2 3
413 ALL BASIC BUDGETARY ALLOWANCES (COMBINED)			1 2 3		1 2 3	1 2 3
420 SPECIAL CIRCUMSTANCE ALLOWANCE			1 2 3		1 2 3	1 2 3

Table of Contents

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
510 PROPER PERSON IN BUDGET	OTHER (500)		1 2 3	[redacted]	1 2 3	1 2 3
520 ARITHMETIC COMPUTATION			1 2 3	1 2 3	1 2 3	1 2 3
530 BENEFICIARY LIABILITY DETERMINATION			[redacted]	[redacted]	1 2 3	[redacted]
540 GRANDFATHERED COVERAGE PROVISIONS			[redacted]	[redacted]	1 2 3	[redacted]

Work Sheet

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION

Review No. _____

ELEMENTS OF ELIGIBILITY AND PAYMENT DETERMINATION	QC ANALYSIS OF CASE RECORD *(Pertinent facts, sources of verification, reliability, gaps or deficiencies)*	FINDINGS OF FIELD INVESTIGATION *(Facts obtained, verification and substantiation, nature of errors)*	RESULTS			
			AFDC	FS	MQC	ADULT
(1)	(2)	(3)	(4)	(5)	(6)	(7)
550 OTHER STATE MEDICAID CRITERIA					1 2 3	
580 MONTHLY REPORTING				1 2 3	1 2 3	1 2 3
570 STATE ONLY CONDITIONS OF ELIGIBILITY			1 2 3		1 2 3	1 2 3
810 FOOD STAMP SIMPLIFICATION PROJECT				1 2 3		

Table of Contents

Table of Contents

APPENDIX C

QC REVIEW COMPUTATION SHEET

Table of Contents

FOOD STAMP QUALITY CONTROL COMPUTATION SHEET

	ELIGIBILITY (1)	FINAL SAQC DETERMINATION (2)	(3)	(4)	(5)
Wages, salaries, Federal workstudy minus allowable expenses, or other income from employment. (Do not count excluded income)					
Member : Source					
:					
:					
:					
1. Add Line K from Self-Employment addendum sheet (if applicable) and all earned income listed above.					
Educational grants, scholarships, or loans (except Federal workstudy)					
2. Enter monthly income received from educational grants, etc.					
3. Enter monthly tuition and mandatory fees and other allowable expenses.					
4. Subtract 3 from 2.					
5. Add lines 1 and 4.					
Unearned Income (Do not count excluded income)					
:					
:					
:					
6. Total unearned income.					
Gross monthly income					
7. Add lines 5 and 6.					
8. Enter net loss from line K, if applicable.					
9. Subtract line 8 from 7. (Result is gross monthly income.)					
10. Enter appropriate gross income eligibility limit.					
Go to line 11 only if: —line 9 is less than or equal to line 10; or —household contains an elderly/disabled member; or —all members are authorized to receive Public Assistance or SSI.					
DEDUCTIONS: (Other than shelter)					
11. Multiply line 1 by 20% and enter result here.					
12. Subtract 11 from 9.					
13. Enter standard deduction.					
14. Subtract line 13 from 12.					
15. Enter medical costs over limit for household with elderly/disabled member					
16. Subtract line 15 from 14.					
17. Enter dependent care costs (not to exceed authorized limit).					
18. Subtract line 17 from 16.					
19. If household had shelter costs, divide line 18 by 2 and enter results here.					

FOOD STAMP QUALITY CONTROL COMPUTATION SHEET

	ELIGIBILITY WORKER (1)	FINAL SAQC DETERMINATION (2)	(3)	(4)	(5)
SHELTER COSTS: (Use either the utility standard or the actual cost of each utility bill.)					
Rent or mortgage					
Taxes and insurance					
Total utility standard					
Telephone (Basic rate)					
Electric					
Gas					
Oil					
Water and Sewerage					
Garbage and trash					
Installation of utilities					
Other					
20. Total shelter costs					
21. Enter amount from line 19					
22. Subtract line 21 from 20 (Result equals excess shelter costs).					
23. If no elderly disabled member, enter the maximum limit for the shelter deduction.					
NET MONTHLY INCOME					
24. Enter amount from line 18 (income after all deductions except shelter)					
25. If elderly/disabled member, enter line 22. For all other households, enter amount from line 22 or 23, whichever is less.					
26. Subtract line 25 from 24. (Result equals net monthly income)					
27. Enter appropriate net income eligibility limit.					
Go to line 28 only if: -- Line 26 is less than or equal to line 27; OR -- all members receive Public Assistance or SSI					
ALLOTMENT LEVEL					
28. Enter Thrifty Food Plan for household size.					
29. Multiply line 26 by 30% and enter result here.					
30. Subtract line 29 from 28; (prorating or applying minimum allotment if required)					

Table of Contents

FOOD STAMP QUALITY CONTROL
COMPUTATION SHEET
SELF-EMPLOYMENT ADDENDUM

FOR HOUSEHOLDS WITH SELF-EMPLOYMENT INCOME: START AT STEP A AND WORK THROUGH STEP K. DO THE STEPS IN ORDER. IF A NEGATIVE NUMBER RESULTS AFTER SUBTRACTING TWO NUMBERS, INSERT ZERO, EXCEPT LINES D, J, AND K.	ELIGIBILITY (1)	FINAL SAQC DETERMINATION (2)	(3)	(4)	(5)
FARM SELF-EMPLOYMENT INCOME					

Table of Contents

Table of Contents

APPENDIX D

INTEGRATED REVIEW SCHEDULE

Table of Contents

Table of Contents

Form Approved
OMB No. 0970-0035

INTEGRATED REVIEW SCHEDULE

(For Optional State Use)

PRIVACY ACT/PAPERWORK NOTICE ACT: This report is required under provisions of 45 CFR 205.40 (AFDC), 7 CFR 275.14 (Food Stamp), and 42 CFR 431.800 (Medicaid). This information is needed for the review of State performance in determining recipient eligibility. The information is used to determine State compliance, and failure to report may result in a finding of non-compliance.

I. REVIEW SUMMARY

1. Review Number
1a. Case Number
2. State and Local Agency Codes
3. Sample Month and Year
4. Stratum
5. Review Type
6. Disposition — AFDC/ADULT | FS | MA
7. Review Findings — AFDC/ADULT | FS
8. Amount of Error — AFDC/ADULT | FS

II. CASE INFORMATION

	9. Most Recent Opening	9a. Prior Assistance	10. Most Recent Action	11. Type of Action	12. No. of Case Members	13. Liquid Assets	14. Real Property (Excl. Home)	15. Countable Vehicle Assets	16. Other Non-Liquid Assets
ADULT									
AFDC									
FS									
MA									

CASE INFORMATION - AFDC/ADULT

17. Monthly Payment Standard
18. Sample Month's Payment
19. Restricted Payment Status
20. Unborn Child
21. Shelter Arrangement
22. Gross Countable Income
23. Work-Related Expenses
24. Child or Dependent Care Disregard
25. First $30 and 1/3 of Remainder
26. Net Countable Income

CASE INFORMATION - FOOD STAMP

27. Case Classification
28. Months in Certif. Period
29. Coupon Allotment
30. Exped. Service
31. Auth. Rep.
32. Gross Countable Income
33. Earned Income Deduction
34. Medical Cost
35. Shelter Cost
36. Dependent Care Cost
37. Net Countable Income

CASE INFORMATION - MEDICAID

38. Medical Expenses Used to Meet Spenddown — Type | Amount
39. Gross Countable Income
40. Net Countable Income

Table of Contents

Form Approved
OMB No. 0970-0035

INTEGRATED REVIEW SCHEDULE

(For Optional State Use)

PRIVACY ACT/PAPERWORK NOTICE ACT: This report is required under provisions of 45 CFR 205.40 (AFDC), 7 CFR 275.14 (Food Stamp), and 42 CFR 431.800 (Medicaid). This information is needed for the review of State performance in determining recipient eligibility. The information is used to determine State compliance, and failure to report may result in a finding of non-compliance.

I. REVIEW SUMMARY

1. Review Number
1a. Case Number
2. State and Local Agency Codes
3. Sample Month and Year
4. Stratum
5. Review Type
6. Disposition — AFDC/ADULT, FS, MA
7. Review Findings — AFDC/ADULT, FS
8. Amount of Error — AFDC/ADULT, FS

II. CASE INFORMATION

	9. Most Recent Opening	9a. Prior Assistance	10. Most Recent Action	11. Type of Action	12. No. of Case Members	13. Liquid Assets	14. Real Property (Excl. Home)	15. Countable Vehicle Assets	16. Other Non-Liquid Assets
ADULT									
AFDC									
FS									
MA									

CASE INFORMATION - AFDC/ADULT

17. Monthly Payment Standard
18. Sample Month's Payment
19. Restricted Payment Status
20. Unborn Child
21. Shelter Arrangement
22. Gross Countable Income
23. Work-Related Expenses
24. Child or Dependent Care Disregard
25. First $30 and 1/3 of Remainder
26. Net Countable Income

CASE INFORMATION - FOOD STAMP

27. Case Classification
28. Months in Certif. Period
29. Coupon Allotment
30. Exped. Service
31. Auth. Rep.
32. Gross Countable Income
33. Earned Income Deduction
34. Medical Cost
35. Shelter Cost
36. Dependent Care Cost
37. Net Countable Income

CASE INFORMATION - MEDICAID

38. Medical Expenses Used to Meet Spenddown — Type, Amount
39. Gross Countable Income
40. Net Countable Income

Table of Contents

REVIEW NUMBER | (For Optional State Use)

III. DETAILED PERSON - LEVEL INFORMATION

41. Person Number	42. Food Stamp Case AR#	43. AFDC/AA Case AR#	44. Relationship to Head of Household	45. Age	46. Sex	47. Race	48. Citizenship Status	49. Education Level	50. Employment & Training Program Status	51. Employment Status	52. Institutional Status

IV. TOTAL HOUSEHOLD INCOME, BY HOUSEHOLD MEMBER AND TYPE AND AMOUNT OF INCOME

53. Person Number	54. Type of Income	55. Amount of Income	56. Type of Income	57. Amount of Income	58. Type of Income	59. Amount of Income	60. Type of Income	61. Amount of Income

Table of Contents

REVIEW NUMBER | (For Optional State Use)

VII. PAYMENT REVIEW INFORMATION - MEDICAID

77. Dollar Amount of Paid Claims	78. Final Case Elig. Status	79. Revised Initial Case Liability Error	80. Spend-down Months	81. Total Claims Used to Offset Initial LU Errors	82. Final Dollar Amount of Case Liability Errors	83. Final Dollar Amount of Case Eligibility Errors

VIII. OPTIONAL - FOR STATE SYSTEMS ONLY

1.
2.
3.
4.

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Table of Contents

APPENDIX E

DESIGN OF THE SAMPLE OF ADMINISTRATIVE CASE FILES

Table of Contents

The values recorded in the IQCS database for income, expenses, deductions, demographic data, and other items, are the values obtained by the caseworker, as ascertained by the state reviewer. (The food stamp coupon allotment is the actual amount received by the household in the sample month, although it, too, is entered by the state reviewer.) The state reviewer--or the federal reviewer at a later date--may have determined that, for whatever reason, one or more of these values is incorrect. Many of the cases with error findings will have income or expense amounts that, in the reviewer's judgment, are incorrect for the sample month. The limited information recorded in the IQCS data may be insufficient to deduce the reviewer's assessment of true values. Our abstraction of data from a sample of case files was intended to capture the more accurate values ascertained by the reviewers and thus provide a means of assessing the error in the IQCS data.

OBJECTIVES OF THE DATA COLLECTION

The purpose of the data collection was to capture for a sample of IQCS records in one year some information that could be used to evaluate the quality of the data as they are reported in the raw file and later edited to produce the analytical file. A sample size of 500 was dictated by the statement of work for the quality profile task, and we budgeted our effort accordingly. Apart from the need to capture state and federal reviewers' data, with the hope that they might be used to ascertain "truth," against which the IQCS data could be evaluated, the requirements of the data collection were left open. After reviewing a small number of case files in the national office and then a larger, pre-specified set in the Mid-Atlantic region, we determined the set of items that we thought would be most useful to obtain for the case review files, and we developed a data collection protocol. We had budgeted one hour per case for the data collection, and the protocol was targeted to this limit.

In discussions with FCS, one area in which an evaluation of current data and the potential for its improvement was indicated to be useful was household assets. We devoted a significant portion of the protocol to the capture of detailed data on asset holdings. The time requirements of the asset data collection were relatively small, however, because few participating households had more than nominal holdings.

SAMPLE DESIGN

The statement of work for Task 7 provided for the collection of data from approximately 500 case records drawn from "several" of the seven FCS regional offices. We proposed to collect data from four of the regions. We selected two of the regions for operational reasons: Mid-Atlantic because its close proximity to MPR's New Jersey office provided the ease of access that was crucial to developing and testing the data collection instrument, and Western region because of its willingness to ship case files to MPR, giving us a longer window for data collection and allowing greater flexibility in assigning a mix of resources to the data abstraction. Considerations of cost and efficiency were indicated in the statement of work. To select two additional regions we evaluated the remaining five regions with respect to our sample stratification variables, described below, and overall caseload size. We selected Southeast and Midwest--two relatively large regions that provided rather different patterns on our stratification variables.

If a sample of only 500 cases was to provide useful information on corrections to data values in the IQCS database and address the requirements of the analyses that were specified in the statement of work, it was clear from the outset that we would have to oversample cases that were likely to contain differences between values reported by the reviewers and those recorded in the IQCS data. At the same time, a sample of only 500 cases required a simple design. We determined that two types of errors that were identifiable from the IQCS data themselves provided a good basis for stratifying the sample: (1) state error findings, which related directly to the likelihood that the values recorded in one or more fields in the IQCS

data and the reviewers' reports would be different, and (2) internal inconsistencies identified by MPR and addressed in MPR's edits in creating the annual QC database.

To identify the presence or absence of either type of error, we created two variables. STATEFND indicated the presence or absence of an error finding by the state reviewer, where an error finding consists of an over- or underissuance in excess of $5 (including a determination that the household was ineligible for benefits). ANYERR indicated whether the record did or did not fail any of the following four MPR consistency tests:

1. Reported gross income is equal to the sum of the income of all persons in the FSP unit
2. Reported earned income deduction is equal to 20 percent of the sum of earnings over all persons in the unit
3. Reported net income is equal to reported gross income minus reported deductions
4. Reported food stamp benefit is equal to the bonus value implied by reported net income and unit size

The reported value in each case is the value ascertained by the original caseworker and recorded by the state reviewer on the first page of the Integrated Review Schedule (IRS)--the coding form for the IQCS database.

The 1993 IQCS file contains 56,832 records with completed state reviews. Of these, 25 percent (unweighted) reported a payment error. At the regional level (again unweighted), this percentage varied from a low of 20 percent to a high of 28 percent--a fairly narrow range.

There is much more variation with respect to the MPR consistency tests, however. Of the 56,832 records with completed state reviews, 17 percent failed the first MPR consistency test, 2 percent failed the second, 16 percent failed the third, and 16 percent failed the fourth test. Altogether, 33 percent or one of every three records failed at least one of the four tests. Across the seven regions, the percentages failing

one or more tests varied from a low of 19 percent to a high of 46 percent. Most of the variation was introduced by the gross income test. In two regions only 4 percent of the records failed this test while two other regions had failure rates approaching 30 percent.

The overlap between records with state error findings and MPR-identified inconsistencies was rather small. Despite the comparable frequencies of error by the two measures, more than two-thirds of the records with inconsistencies identified by MPR did not have error findings, and nearly two-thirds of the records with state error findings did not have MPR inconsistencies (at least, not among the four tests). While we could understand how records could have payment errors without being internally inconsistent (the reviewer might have found income that was not reported to the caseworker or to FCS), or could be internally inconsistent without having payment errors (data could have been entered incorrectly on the IRS or simply miskeyed), the amount of overlap was considerably lower than we would have anticipated. This suggested that in designing our sample we might want to define strata based on all four cells of the two-by-two table described by the cross-tabulation of STATEFND by ANYERR, and this, in fact, is what we did.

Because the IQCS data are used to develop state estimates of error rates, there is a need for precision at the state level. As a result, the state sample sizes are much more nearly equal than they are proportional to caseloads, and the federal re-review subsamples are even more nearly uniform. With a sample of only 500 cases, however, state level analysis was out of the question. Furthermore, to assess the impact of IQCS error on certain of the major uses of the data required that we weight the sample to the population of food stamp households in the four regions rather than to the IQCS sample size. To maximize the statistical efficiency of such a small sample with respect to estimates at the aggregate caseload level required that we select cases in such a way that their selection probabilities (and hence their weights) would vary little beyond the minimum needed to achieve the desired distribution of sample cases among the four regions and four substrata. Consequently, a sample that mirrored the actual distribution of food stamp households by state was more desirable than one that reflected the IQCS distribution.

Within each of the four regions we stratified by state and by the combination of STATEFND and ANYERR. Within each state, therefore, we had four substrata or cells. To complete the sample design, we had to specify a target sample size for each cell. We did so as follows. First, to each of the four regions we allotted a sample size of 125, or one quarter of the total sample size of 500 that was specified in the scope of work. We also allocated, across the four regions, 125 sample observations to each of the four substrata defined by the combination of STATEFND and ANYERR. For each of the regions we then estimated the weighted distribution of cases with completed state reviews by state, STATEFND, and ANYERR. We used this tabulation to develop preliminary sample size targets. In effect, within each region and each of the four strata defined by STATEFND and ANYERR we distributed 31.25 sample observations (one quarter of 125) across the states in proportion to the state population estimates (for that stratum), but subject to the requirement that no cell be assigned fewer than two sample observations. We then rounded these sample sizes to whole numbers in such a way that we achieved 125 observations in each region and 125 observations in each of the four substrata.

For three of the four regions (all but Mid-Atlantic, the smallest of the four) we prepared supplemental samples of 25 observations each--to be used if our data collection resources afforded the additional time. The supplemental samples were allocated so as to improve the distribution of sample sizes relative to the estimated population sizes by state and substratum. This had the effect of reducing the variance of the weights within each of the three regions. Our final sample size of coded records was 574.